Introducing the WISC-V Integrated
Gloria Maccow, Ph.D., Assessment Training Consultant

Objectives

1. Describe process-oriented assessment.
2. Describe WISC-V Integrated.
3. Illustrate clinical utility of WISC-V Integrated.
Purpose of WISC-V Integrated

1. Assess cognitive and problem-solving processes (ages 6:0–16:11).
2. Help clinicians understand how examinee learns.
3. Facilitate interpretation of low scores on WISC-V.

What is WISC-V Integrated?

WISC-V Integrated: Process-Oriented Assessment

Process-Oriented Assessment
Careful, systematic observation of a child's problem-solving strategy (process) can yield richer and more useful information about cognitive functioning than simple right-wrong scoring of their final solution (product).


1. Provide additional information about subtest performance.
2. Enhance depth of interpretation and understanding of performance.
3. Facilitate understanding of scores from a process approach perspective.
WISC-V Integrated: The Best of Both Worlds

Product ("What")
- Level of performance
- Quantitative
- Scores
- Norm-referenced

Process ("Why")
- Nature of behaviors
- Qualitative/Quantitative
- Strategies
- Correlates with brain function

Assumptions of the Process-Oriented Approach
Any one factor – or a combination of factors – may contribute to a child’s performance on a task.

Cognitive tests are multi-factorial

Assumptions of the Process-Oriented Approach
Process-oriented approach attempts to identify cognitive sub-processes contributing to score.
E.g., for Vocabulary:
- Receptive language problem - Difficulty understanding directions, stimulus words
- Lack of word knowledge
- Difficulty accessing mental lexicon - Problems with retrieval from long-term storage
- Expressive language problem
Barbara
Scaled Score = 5
Lacks semantic knowledge: Does not know what words mean

Joseph
Scaled Score = 5
Expressive language problem: Knows word meanings, but cannot produce the words to express his knowledge

Rose
Scaled Score = 5
Poor visual-perceptual and spatial reasoning abilities.

Mark
Scaled Score = 5
Poor visuomotor skills.

Sue
Scaled Score = 6
Below average storage capacity.

Sam
Scaled Score = 6
Below average mental manipulation.
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Coding

Aaron
Scaled Score = 5
Slow processing speed.

Jason
Scaled Score = 5
Slow graphomotor speed.

Process-Oriented Approach to Interpretation

WISC-V and WISC-V Integrated

<table>
<thead>
<tr>
<th>Domain</th>
<th>WISC-V</th>
<th>WISC-V Integrated</th>
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<tbody>
<tr>
<td>Sequential</td>
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Process Subtests

14 Optional Process Subtests

- 8 Adaptations
- 2 Variations
- 4 Expansions/Extensions

Adaptations

Same item content as corresponding primary or secondary WISC-V subtest, and modifications to mode of presentation, response format, or item administration.

- Similarities MC
- Vocabulary MC
- Picture Vocabulary MC
- Comprehension MC
- Information MC
- Figure Weights
- Arithmetic Process Approach
- Written Arithmetic

Variations

Novel item content and modifications to mode of presentation, response format, or item administration.

- Block Design MC
- Cancellation Abstract
Expansions/Extensions

Expand scope of construct coverage and provide information related to child’s performance on other subtests

- Coding Copy
- Coding Recall
- Sentence Recall
- Spatial Span

Process Subtest Selection

- Don’t use all processing subtests/procedures with every child
- Select based upon:
  - Referral questions
  - Observations made during core assessment
  - Need to collect confirmatory data

Description of Process Subtests
Verbal Multiple Choice Process Subtests

- Similarities Multiple Choice (Similarities MC)
- Vocabulary Multiple Choice (Vocabulary MC)
- Picture Vocabulary Multiple Choice (Picture Vocabulary MC)
- Information Multiple Choice (Information MC)
- Comprehension Multiple Choice (Comprehension MC)

Verbal Multiple Choice Process Subtests

- Each subtest uses frequently given correct and incorrect responses from the related WISC-V version.
- All but Picture Vocabulary MC and Information MC scored on a 2, 1, 0 basis as on WISC-V subtests.
- Rationale: Integrated subtests remove the need for using expressive language or recalling information from long-term storage.
Similarities Multiple Choice (SIMC)

- SIMC is a multiple-choice adaptation of the WISC–V Similarities subtest.
- Each item and its response options are presented visually and read aloud.
- The child selects the response option that best represents how the common objects or concepts are similar.

Vocabulary Multiple Choice (VCMC)

- VCMC is a multiple-choice adaptation of the WISC–V Vocabulary subtest.
- For each picture item, the child views a picture and selects the best response from options read aloud.
- For verbal items, each item and its response options are presented visually and read aloud.
- The child selects the response option that best represents the definition of the word.

Picture Vocabulary Multiple Choice (PVMC)

- PVMC is a pictorial multiple-choice adaptation of the WISC–V Vocabulary subtest.
- The child views four pictures and selects the picture that best depicts the definition of the word that is presented verbally.
Information Multiple Choice (INMC)

- INMC is a multiple-choice adaptation of the WISC-V Information subtest.
- Each item and its response options are presented visually and read aloud.
- The child selects the response option that best represents an understanding of the general knowledge topic.

Comprehension Multiple Choice (COMC)

- COMC is a multiple-choice adaptation of the WISC-V Comprehension subtest.
- Each item and its response options are presented visually and read aloud.
- The child selects the response option that best represents an understanding of the general principle or social situation.
Block Design Multiple Choice (BDMC)

- BDMC is a multiple-choice variation of the WISC-V Block Design subtest.
- The child views a picture of a constructed block design and selects the pictured block set that produces a matching composition, within a specified time limit.
- Assesses visual integration and mental construction skills without the influence of motor planning and execution.

Fluid Reasoning Process Subtests

Figure Weights Process Approach (FWP)

- FWP is an adaptation of the WISC–V Figure Weights subtest in which the child is given additional time to respond.
- Within an extended time limit, the child is readministered Figure Weights items previously scored 0 points.
Arithmetic Process Approach (ARP)

- ARP is an adaptation of the WISC–V Arithmetic subtest. Specific items 6–34 are presented in multiple modalities for the child to solve within a specified time limit.
- For Part A, Arithmetic items on which the child scored 0 points are presented visually and simultaneously read aloud.
- For Part B, the child is provided paper and pencil, and is readministered the items scored 0 points in Part A.

Written Arithmetic (WA)

- WA is an adaptation of the WISC–V Arithmetic subtest.
- The child is presented with the mathematical computations for Arithmetic items and uses a pencil to complete them.

Arithmetic Process Approach and Written Arithmetic

Working Memory

Math Skills

Performance on AR Subtest
Working Memory Process Subtests

Spatial Span (SSP)

- SSP is a variation of the WISC–V Digit Span subtest. DS uses numbers; SSP uses letters.
- For Spatial Span Forward, the child reproduces a sequence of tapped blocks.
- For Spatial Span Backward, the child reproduces in reverse order a sequence of tapped blocks.

Spatial Span (SSP)

- SSP provides an assessment of spatial working memory.
- SSP score can be contrasted with various verbal working memory measures.
- Letters/words/pseudowords are easier to remember and administer/score.
Sentence Recall (SR)

- SR items are composed of two tasks: a question task and a recall task.
- For the question task, the child responds either “Yes” or “No” to one or more simple questions.
- For the recall task, the child recalls the last word of each question, in the order presented.

Processing Speed Process Subtests

Coding Recall (CDR)

- CDR expands the scope of the WISC-V Coding subtest.
- Working within a specified time limit and without a key, the child attempts to remember the corresponding pairs from Coding in three formats: cued recall, free recall, and pairing.
- After completing Coding, examinee recalls
  - symbols associated with each number of shape: cued (Form A and Form B);
  - symbols via free recall;
  - numbers associated with each symbol: pairing (Form B only).
Coding Copy (CDC)

- **CDC expands** the scope of the WISC–V Coding subtest. Within a specified time limit, the child copies the symbols used in Coding.
- Allows examiner to assess impact of graphomotor speed on performance on Coding.
  - Low scores on Coding Copy: Possibly poor graphomotor speed interfering with Coding performance.
  - High scores on Coding Copy: Possibly poor incidental learning and visual scanning interfering with Coding performance.

Cancellation Abstract (CAA)

- **CAA is a variation** of the WISC–V Cancellation subtest.
- Working within a specified time limit, the child scans two arrangements of shapes (one random, one structured) and marks target shapes.
Subtest Scores

- Scores on the 14 WISC-V Integrated process subtests are reported as scaled scores (mean = 10; standard deviation = 3).
- The scaled scores for the process subtests are for comparison purposes only.

Scaled scores for process subtests are not used in the calculation of WISC-V Primary Index Scores and Full Scale IQ.

Composite Scores

**MCVCI** (Multiple Choice Verbal Comprehension Index)

- **SIMC + VCMC**
- Provides an estimate of verbal comprehension
- Helpful for examinees with expressive language difficulties

**VWMI** (Visual Working Memory Index)

- **Picture Span + Spatial Span**
- Compare with WISC-V AWMI
- Working memory domain specific at this age-range

Other Scores

- Parts, where it makes sense
  - e.g., Spatial Span Forward, Spatial Span Backward, and comparison
  - e.g., Arithmetic Process Approach Part A and Part B, and comparison
- Longest span scores
Process Observations

• The same process observations as are available on WISC-V in Appendix D of the Technical and Interpretive Manual.
• Base rates for behaviors.

Comparison Scores

Discrepancy comparisons with WISC-V
  – Compare process scores and subtests
  – Compare composite scores where it makes sense (e.g., VCI vs. MCVCI)

Clinical Utility of WISC-V Integrated
### Male, Grade 5, Age 10:5

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<th>WISC-V Index/Subtest</th>
<th>Composite Score/ Scaled Score</th>
<th>WISC-V Integrated Subtest</th>
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### Addition of WISC-V Integrated

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### WISC-V Integrated Kit

- Administration and Scoring Manual
- Technical and Interpretive Manual
- Record Form
- Stimulus Books 1 and 2
- Response Booklets 1 and 2
- Coding Recall Scoring Key
- Cancellation Abstract Scoring Template
- Spatial Span Board
- #2 Pencil without eraser