WISC-IV As a Process Instrument

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Harcourt Assessment/PsychCorp

Agenda
- Review of WISC IV Structure
- Analysis of Performance
- Ten Steps of WISC-IV Score Analysis
- Meet the Kids
- Introduction to the WISC-IV Integrated

Structure of WISC IV
Supplemental Subtests

- VCI: Information and Word Reasoning
- PRI: Picture Completion
- WMI: Arithmetic
- PSI: Cancellation

1. Use as a substitute for a core subtest when the core subtest is spoiled.
2. Use as additional sources of information to:
   1. Test your hypothesis
   2. Help understand performance on a core subtest
   3. Guide intervention planning

Profile Analysis

- Evaluation of performance in terms of patterns of composite and subtest scaled scores
  - Can be both:
    - Interindividual – Compare child’s score patterns to appropriate normative reference group
    - Intraintividual – Compare child’s score patterns across subtests, composites
- Helps identify potentially meaningful patterns of strengths and weaknesses

Profile Analysis

- Hypotheses generated based on referral question may be either corroborated or refuted by:
  - WISC–IV profile analysis
    - In conjunction with:
      - Background information
      - Direct behavioral observations
      - Other evaluation results
General Guidelines for a Process-oriented Approach

- WISC IV information must be integrated with other information available about the child, his cultural background, and his home and school environments.
- A process-oriented approach can be visualized as a process of information aggregation that combines details within a conceptual framework unit to produce a more easily distinguishable pattern.

WISC-IV: A Process Approach

- Full Scale
- Indexes
- Subtests
- Items
- Task
- Component
- Processes

More About the Process-approach

- Belief that how a child performs tasks is as important, and often even more important, than the score he obtains at the subtest and above levels of aggregation.
- Understanding performance on individual items, including the kinds of errors a child makes, can provide rich clinical information when it can be established that the observations reflect a pattern of behavior observed in multiple contexts.
Understanding the multiple component processes involved in performing individual items of a subtest can add substantial depth to the clinical interpretation of test performance.

Describing the strategies a child employs when performing tasks provides a basis of interpretation that resonates deeply with parents and teachers and even with the child.

Process Approach Requires

1. That the examiner be a keen observer.
2. That the examiner use a problem-solving model that includes the formulation and testing of various hypotheses.
3. That the examiner know what every subtest measures (and how it does it) and what subtests have in common as well as their differences.

Suggested Procedures for Basic Profile Analysis

1. Report and describe FSIQ (and/or GAI)
2. Report and describe VCI
3. Report and describe PRI
4. Report and describe WMI
5. Report and describe PSI
6. Evaluate index-level discrepancy comparisons
7. Evaluate strengths and weaknesses
8. Evaluate subtest-level discrepancy comparisons
9. Evaluate patterns of scores within subtests
10. Perform process analysis (Core and Supplemental subtests)
Step 1 FSIQ

- Most reliable score obtained
- Derived from combined sums of scaled scores for 10 Core subtests
- Usually considered most representative of general intellectual functioning (g)
- Report with corresponding:
  - Percentile rank
  - Confidence interval
- Interpretation depends upon:
  - Collaborative information
  - Discrepancies among index scores
  - Also evaluate variability in subtest scaled scores within composites

Steps 2 – 5 Individual Index Scores

- Analysis of four composite scores recommended as primary level of clinical interpretation
- Analysis will aid in determining role of FSIQ
- Analysis will help determine when to use GAI
- Interpret index scores with greater confidence when scores on contributing subtests are similar

Intersubtest Scatter within Index Scores
Verbal Comprehension Index

VCI Measures:
- Verbal concept formation; verbal reasoning; knowledge acquired from one’s environment
- Similar to VCI on WISC–III, WAIS–III
  - Reduced emphasis on acquired knowledge
  - Purser, more refined measure of verbal reasoning and conceptualization than VIQ
- One of best predictors of overall intelligence.
- Sometimes a low score occurs because the student has acquired the information but does not have the expressive language to demonstrate it.

Perceptual Reasoning Index

PRI Measures:
- Perceptual and fluid reasoning; spatial processing; visual-motor integration
- Compared to PIQ, POI on WISC–III:
  - Places greater emphasis on fluid reasoning
  - Greatly reduces importance of speed
- Picture Concepts score may differ from other PRI scores because of the effect of language on PC performance

Working Memory Index

WMI Measures:
- Working memory
  - The ability to temporarily retain information in memory, perform some operation or manipulation with it, and produce a result
  - Involves attention, concentration, mental control, reasoning
  - Essential component of other higher order cognitive processes
  - Closely related to achievement and learning and frequently affected in LD
### Processing Speed Index

**PSI Measures:**

- Ability to quickly and correctly scan, sequence, or discriminate simple visual information
- Short-term visual memory; attention; visual-motor coordination
  - Note any influence of visual-motor coordination on PSI score
- May be the highest index score for mild-MR student (can be > 70 and can raise FSIQ)

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### Step 6 Index-Level Discrepancy Comparisons

- Use "Discrepancy Comparisons" on p. 27 of Record Form to evaluate differences between pairs of index scores
- For each pairwise difference, must evaluate both:
  - Statistical significance (Table B.1)
  - Cumulative frequency (base rate) (Table B.2)

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### Statistical vs. Clinical Significance

- The *statistical significance* of a score difference is much less important than how unusual it is (i.e., its frequency)
  - Significance ($p < .05$) indicates only the likelihood that difference is real (not due to chance, error components)
  - Frequency tells us whether that difference is *unusually large* and therefore likely to be important
Statistical Significance of Index Score Differences

Condition 1

Condition 2

General Ability Index (GAI)

• Additional composite score
  – In WISC–IV Clinical Use and Interpretation book
  – Available at PsychCorp.com as Technical Report #4

• Calculated from unweighted sum of 6 VCI and PRI subtests
  These subtests are:
  – Good measures of crystallized and fluid ability
  – Highly correlated with g (general ability)

General Ability Index (GAI)

• May be more appropriate global measure of ability for some students:
  – Learning-disabled and/or ADHD
    • Information processing deficits reflected in ↓ WMI, PSI
    • Unduly lowers FSIQ (WMI + PSI = 40% of FSIQ)
    • May mask bona fide ability-achievement discrepancies
  – Those near extremes of distribution
    • Mentally retarded
    • Intellectually gifted
  – Those with TBI or other NP conditions
    • May be more resilient to brain insults
Using GAI

1. Start by conducting the index and subtest level discrepancy analyses.
2. Do not use GAI if there is a discrepancy between VCI and PRI. Also be cautious if subtests on VCI and PRI scales vary significantly.
3. In addition, look for a discrepancy between either VCI or PRI and either WMI or PSI.
4. Remember GAI is NOT the same as FSIQ. Rather, GAI controls for the effects of working memory and/or processing speed deficits in the expression of overall intelligence.
5. GAI is useful to a) determine eligibility, b) to evaluate the effects of WM and PS on learning, and c) to identify ability-achievement gaps.

Discrepancies Between GAI and FSIQ

- See Table 2.2 and Table 2.3 (pp 46-47) in WISC IV Clinical Use and Interpretation
- Determine both statistical significance and base rate (10% or less)
- Statistical significance is reported for 3 age groups: 6-11, 12-16, all ages
- Base rates are reported in direction of difference by 3 clinical groups: gifted, MR-mild, and MR-moderate

GAI with Clinical Populations

- Many children with LD or ADHD tend to earn lower scores on both WMI and PSI, which could lead to slightly higher GAI than FSIQ
- Many gifted children tend to score lower on both WMI and PSI, which could lead to slightly higher GAI and FSIQ.
- For some very low functioning children who may score higher on PSI, the GAI may be lower than FSIQ.
- For some African American and Hispanic children who tend to score higher on WMI and PSI, the GAI could be lower than FSIQ.
### Sample Case #1 – Johnny

**FSIQ = 83 (13th %-ile)**

<table>
<thead>
<tr>
<th>VCI</th>
<th>PRI</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS = 91 (27th %-ile)</td>
<td>SS = 92 (30th %-ile)</td>
</tr>
<tr>
<td>SI = 9</td>
<td>BD = 6</td>
</tr>
<tr>
<td>VC = 7</td>
<td>PCn = 13</td>
</tr>
<tr>
<td>CO = 9</td>
<td>MR = 7</td>
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</table>

<table>
<thead>
<tr>
<th>WMI</th>
<th>PSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS = 77 (6th %-ile)</td>
<td>SS = 83 (13th %-ile)</td>
</tr>
<tr>
<td>DS = 7</td>
<td>CD = 5</td>
</tr>
<tr>
<td>LN = 5</td>
<td>SS = 9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SS = 92 (30th %-ile)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BD = 6</td>
</tr>
<tr>
<td>PCn = 13</td>
</tr>
<tr>
<td>MR = 7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SS = 83 (13th %-ile)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CD = 5</td>
</tr>
<tr>
<td>SS = 9</td>
</tr>
</tbody>
</table>

### Sample Case #1 – Johnny

**GAI = 91 (27th %-ile)**

<table>
<thead>
<tr>
<th>VCI</th>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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</thead>
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<td>CD = 5</td>
</tr>
<tr>
<td>SS = 9</td>
</tr>
</tbody>
</table>

### Discrepancies Between GAI and WIAT II

- See Table 2.4 and Table 2.5 (pp 50-51) in WISC IV Clinical Use and Interpretation
- Chose Simple-Difference or Predicted-Difference method
- Statistical significance is reported by WIAT II subtests and composites by 2 age groups: 6-11 and 12-16
- Base rates are reported using both simple and predicted difference methods
7. Strengths and Weaknesses

**Best practice:**
- Begin with hypothesis based on referral question
- Test hypothesis by evaluating score discrepancies and other related clinical information (*Kamphaus, 1993*)
  - Child’s history, referral question, behavioral observations, other test results
Statistical Significance Between Subtest and Mean

• Compare difference between single subtest and average of several subtest scaled scores

<table>
<thead>
<tr>
<th>Subject</th>
<th>Subtest Score</th>
<th>Mean</th>
<th>Critical Value</th>
<th>Stat. Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Design</td>
<td>2.2</td>
<td>3.1</td>
<td>2.0</td>
<td>-38%</td>
</tr>
<tr>
<td>Arithmetic</td>
<td>3.1</td>
<td>3.8</td>
<td>2.0</td>
<td>-38%</td>
</tr>
<tr>
<td>Similarities</td>
<td>2.0</td>
<td>2.5</td>
<td>2.0</td>
<td>-38%</td>
</tr>
<tr>
<td>Score Reasoning</td>
<td>3.0</td>
<td>3.5</td>
<td>2.0</td>
<td>-38%</td>
</tr>
<tr>
<td>Comprehension</td>
<td>3.2</td>
<td>3.1</td>
<td>2.0</td>
<td>-38%</td>
</tr>
</tbody>
</table>

Statistical Significance (Critical Value at .15 level)

Step 8 Subtest-Level Discrepancy Comparisons

• Typically, profile analysis ends with Step 7 but may want to compare two subtest scores to confirm or refute hypothesis
  - e.g., Picture Concepts vs. Similarities
  - To evaluate effect of verbal expression demands on categorical reasoning ability
• Again, must evaluate both:
  - Statistical significance (Table B.3)
  - Cumulative frequency (Table B.4)

Statistical Significance Between Subtests

<table>
<thead>
<tr>
<th>Subtest Score Differences</th>
<th>Critical Value</th>
<th>Stat. Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Design - Similarities</td>
<td>2.0</td>
<td>-38%</td>
</tr>
<tr>
<td>Arithmetic - Score Reasoning</td>
<td>2.0</td>
<td>-38%</td>
</tr>
<tr>
<td>Similarities - Score Reasoning</td>
<td>2.0</td>
<td>-38%</td>
</tr>
<tr>
<td>Score Reasoning - Comprehension</td>
<td>2.0</td>
<td>-38%</td>
</tr>
</tbody>
</table>

Statistical Significance (Critical Value at .15 level)
What does it mean when you find a discrepancy?

- You have identified a relative strength or weakness.
- It could be evidence of an underlying processing deficit.
- Something other than intellectual ability could be affecting a score.
- It could indicate specific educational needs of the student.

Step 9 Pattern of Scores within Subtests

- “Intrasubtest scatter”
- Uneven performance within a subtest may indicate:
  - Rapport problems
  - Attentional problems
  - Language problems
  - Boredom (gifted)
  - Difficulty initiating tasks

Step 10 Process Analysis (Core & Supplemental subtests)

- WISC–IV process scores provide more detailed information on cognitive abilities that contribute to child’s performance
  - Interindividual – Compare child’s process scores to those of normative group
  - Intraintividual – Evaluate process scores in relation to child’s other subtest or process scores
Process Analysis of Core & Supplemental Subtests

- Interindividual process information comes from evaluation of:
  - Scaled scores:
    - BDN (Table C.2)
    - DSF, DSB (Table C.3)
    - CAR, CAS (Table C.4)
  - Base rates:
    - LDSF, LDSB (Table D.16)

Condition 1: Statistical Significance
Condition 2: Base rate ≤ 10%

Process Analysis of Core & Supplemental Subtests

- BDN based on child’s performance on Block Design without additional time bonus points for rapid completion
  - Reduced emphasis on speed may be useful when performance on timed tasks hypothesized to be affected by:
    - Physical limitations
    - Problem-solving strategies
    - Personality characteristics
Process Analysis of Block Design

- BD – BDN provides information on relative contributions to performance of speed and accuracy
- Evaluate discrepancy in terms of both:
  - Statistical significance (Table D.3)
  - Base rates (Table D.4)

*Very little difference for most children*

Process Analysis of Digit Span

- DSF and DSB provide information specific to child’s performance on each task (Table C.3)
  - DSF – Primarily registration (encoding)
  - DSB – Primarily mental manipulation (working memory)
- DSF – DSB reflects effect of additional attention and working memory demands on child’s performance abilities
  - Use Tables D.14 and D.15
- LDSF – LDSB similar
  - Use Table D.21

Process Analysis of Cancellation

- CAR and CAS provide measures of child’s visual selective attention and processing speed
  - With random (CAR) and structured (CAS) modes of visual presentation (Table C.4)
- CAR – CAS provides more direct information about effect of visual structure on performance
  - Use Tables D.25 and D.26
Sample Case #3 – Carly

FSIQ = 113 (81st %-ile)

<table>
<thead>
<tr>
<th>VCI</th>
<th>SS = 121 (92nd %-ile)</th>
<th>PSI</th>
<th>SS = 121 (92nd %-ile)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SI = 15</td>
<td></td>
<td>CD = 13</td>
</tr>
<tr>
<td></td>
<td>VC = 14</td>
<td></td>
<td>BD = 14</td>
</tr>
<tr>
<td></td>
<td>CO = 12</td>
<td></td>
<td>PCn = 9</td>
</tr>
<tr>
<td>PSI</td>
<td></td>
<td></td>
<td>MR = 8</td>
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</table>

<table>
<thead>
<tr>
<th>WMI</th>
<th>SS = 94 (34th %-ile)</th>
<th>PSI</th>
<th>SS = 121 (92nd %-ile)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>DS = 10</td>
<td></td>
<td>CD = 13</td>
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<tr>
<td></td>
<td>LN = 8</td>
<td></td>
<td>SS = 14</td>
</tr>
<tr>
<td></td>
<td>(CA) = 11</td>
<td></td>
<td></td>
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</table>

Sample Case #2 – Carly

Composite Score Differences

<table>
<thead>
<tr>
<th>Discrepancy Comparisons</th>
<th>Difference</th>
<th>Significant?</th>
<th>Y/N</th>
<th>Base Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCI – PRI</td>
<td>19</td>
<td>Y</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>VCI – WMI</td>
<td>27</td>
<td>Y</td>
<td>3.4%</td>
<td></td>
</tr>
<tr>
<td>VCI – PSI</td>
<td>0</td>
<td>N</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>PRI – WMI</td>
<td>8</td>
<td>N</td>
<td>37.3%</td>
<td></td>
</tr>
<tr>
<td>PRI – PSI</td>
<td>-19</td>
<td>Y</td>
<td>7.3%</td>
<td></td>
</tr>
<tr>
<td>WMI – PSI</td>
<td>-27</td>
<td>Y</td>
<td>4.5%</td>
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</table>

Sample Case #3 – Carly

Process Score Summary

<table>
<thead>
<tr>
<th>Process Score</th>
<th>Scaled Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Design No Time Bonus (BDN)</td>
<td>14</td>
</tr>
<tr>
<td>Digit Span Forward (DSF)</td>
<td>10</td>
</tr>
<tr>
<td>Digit Span Backward (DSB)</td>
<td>11</td>
</tr>
<tr>
<td>Cancellation Random (CAR)</td>
<td>9</td>
</tr>
<tr>
<td>Cancellation Structured (CAS)</td>
<td>13</td>
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</table>
Sample Case #2 – Carly

Process Discrepancy Analysis

<table>
<thead>
<tr>
<th>Process Scores</th>
<th>Difference</th>
<th>Sign</th>
<th>Y/N</th>
<th>Base Rate</th>
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</thead>
<tbody>
<tr>
<td>Block Design – BDN</td>
<td>-0.00</td>
<td>N</td>
<td>----</td>
<td></td>
</tr>
<tr>
<td>DSF – DSB</td>
<td>-1.00</td>
<td>N</td>
<td>45.4%</td>
<td></td>
</tr>
<tr>
<td>CAR – CAS</td>
<td>-4.00</td>
<td>Y</td>
<td>5.6%</td>
<td></td>
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</tbody>
</table>

Do you know this child?

• VCI 75
• PRI 90
• WMI 74
• PSI 85
• FSIQ 76

What are possible hypotheses regarding his performance?

A Closer Look at Aaron

<table>
<thead>
<tr>
<th>Similarities</th>
<th>Vocabulary</th>
<th>Comprehension</th>
<th>Information</th>
<th>Word Reasoning</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>10</td>
</tr>
</tbody>
</table>

VCI 75
A Closer Look

**Block Design** 5
**Picture Concepts** 9
**Matrix Reasoning** 11
**Picture Completion** 10

**PRI** 90

---

A Closer Look

**Digit Span** 6
**L-N Sequencing** 5
**Arithmetic** 13

**WMI** 74

**Coding** 5
**Symbol Search** 10
**Cancellation** 9

**PSI** 85

---

Discrepancy Analysis

<table>
<thead>
<tr>
<th>Discrepancy Computation</th>
<th>Scaled Score 1</th>
<th>Scaled Score 2</th>
<th>t-stat</th>
<th>Critical Value</th>
<th>p-value</th>
<th>Beta</th>
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<tbody>
<tr>
<td>Verbal Reasoning</td>
<td>10</td>
<td>12</td>
<td>2.00</td>
<td>2.00</td>
<td>.051</td>
<td>.10</td>
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<tr>
<td>Perceptual Organization</td>
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<td>8</td>
<td>1.00</td>
<td>1.17</td>
<td>.139</td>
<td>.19</td>
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<tr>
<td>Coding</td>
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<td>7</td>
<td>1.00</td>
<td>1.17</td>
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<td>0.00</td>
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<td>1.00</td>
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<tr>
<td>Total CPI</td>
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<td>108</td>
<td>0.00</td>
<td>0.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

**Total CPI** 108

Has condition 1 been met?

Has condition 2 been met?
What if . . .

- We were able to remove the expressive language requirement of the verbal subtests to determine if he "knows" the answer (perhaps he can "recognize" it) rather than if he can recall it?
- We can.
More information

**WISC IV Integrated Subtest**
- Similarities Multiple Choice
- Comprehension Multiple Choice
- Vocabulary Multiple Choice
- Picture Vocabulary Multiple Choice
- Information Multiple Choice

Compare

<table>
<thead>
<tr>
<th>Subtest</th>
<th>WISC IV</th>
<th>WISC IV Integrated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Similarities</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Comprehension</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Information</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

WISC IV Integrated Subtests

1. Similarities Multiple Choice
2. Vocabulary Multiple Choice
3. Picture Vocabulary Multiple Choice
4. Comprehension Multiple Choice
5. Information Multiple Choice
6. Block Design Multiple Choice
7. Block Design Process Approach
8. Visual Digit Span
9. Spatial Span
10. Letter Span  
11. Letter-Number Sequencing Process Approach  
12. Arithmetic Process Approach  
13. Written Arithmetic  
14. Coding Recall  
15. Coding Copy  
16. Elithorn Mazes

<table>
<thead>
<tr>
<th>Verbal Comprehension Subtests</th>
</tr>
</thead>
<tbody>
<tr>
<td>• multiple choice adaptations of corresponding subtests</td>
</tr>
<tr>
<td>• may administer when child obtains a low score on the corresponding subtest or if the child displays inconsistent or atypical performance</td>
</tr>
<tr>
<td>• designed to reduce the impact of retrieval and/or expressive language on a subtest score</td>
</tr>
<tr>
<td>• can potentially obtain 5 scaled process scores: SIMC, VCMC, PVMC, COMC, and INMC</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Looking at results</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Recognition versus recall</td>
</tr>
<tr>
<td>• Distractor response options</td>
</tr>
<tr>
<td>• Process-level discrepancy analysis</td>
</tr>
<tr>
<td>– SI vs. SIMC, VC vs. VCMC, VC vs. PVMC, CO vs. COMC, and IN vs. INMC</td>
</tr>
<tr>
<td>– facilitative effect of the multiple-choice format on verbal performance appears to be stronger in children with acquired cognitive disorders such as traumatic brain injury than in children with developmental disorders (e.g., Language Disorders)</td>
</tr>
<tr>
<td>– multiple-choice measures may facilitate performance in children with memory retrieval difficulties to a greater degree than those with deficits in oral expression</td>
</tr>
</tbody>
</table>
**Basic Principle of Process Approach**

Careful, systematic observations of problem-solving strategies (process) en route to a solution – whether correct or incorrect – can yield more useful information about cognitive functioning than simple right-wrong scoring of final solution (product).

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**Product**

*“What?”*

- Level of performance
- Quantitative
- Scores
- Norm-referenced

**Process**

*“Why?”*

- Nature of behaviors
- Qualitative/quantitative
- Strategies
- Correlates with brain function

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**Components of Process Approach**

- Evaluate strategies
  - At least as important as responses
  - Indicate how child compensates for weaknesses
- Test the limits
  - Go beyond standardized administration
  - See what child can do with modifications
- Tease out factors affecting performance
  - Must know why score was low to know how best to intervene
Components of Process Approach

Integrates:
• Psychometric reliability and validity
• Descriptive richness
• Relevance to real-life concerns

Objectives of Process Approach

• Identify pattern of cognitive strengths and weaknesses responsible for child’s observed academic difficulties
  – Look for match with common patterns with known etiology, validated treatments
• Generate individualized recommendations for intervention and accommodation
  – Whether or not child qualifies for SPED

Process Approach to Assessment

• Each subtest requires use of multiple cognitive processes
• Breakdown in any one can cause failure
• Nature of errors helps determine which process is faulty
Process Approach to Assessment

• Understand task requirements
  – Input format
  – Internal processing demands
    Especially, differences in demand for:
    • Receptive and/or expressive language skills
    • Retrieval from long-term storage
    • Executive control of multiple processes/steps
    • Speeded performance
  – Output format

• How did child approach the task?
  – Real-time observations
  – Review of examiner notes for patterns
• If the child performed well:
  – What strengths or strategies contributed to this?
• If he did poorly:
  – What cognitive weaknesses appear to be responsible?
  – Where did performance breakdown occur?
  – What, if any, modifications brought about improvement?

• How is this sample of observed behavior likely to relate to the child’s academic problems?
• What do our observations and inferences suggest regarding potentially effective:
  – Teaching strategies?
  – Remedial interventions?
  – Modifications and/or accommodations?
Why Use a Process Approach to Assessment?

- Facilitate reliable and valid interpretation of observations
- Rule in/rule out hypotheses
- Provide baseline information
- Determine reasons for low scores on WISC–IV subtests
- Plan interventions
  - Where in information processing circuit do problems occur?

Administration Tips

- (Almost) always give Supplementary subtests
  - Information
  - Word Reasoning
  - Picture Completion
  - Arithmetic
  - Cancellation

Administration Tips

- Record all responses – and steps toward responses – verbatim
  - Highlights child’s strategies (processing)
  - Clarifies language impairments
  - Allows for more accurate scoring
  - Facilitates examiner recall when writing reports
As Wechsler (1975) noted:

What we measure with tests is not what tests measure—not information, not spatial perception, not reasoning ability. These are only a means to an end. What intelligence tests measure is something much more important; the capacity of an individual to understand the world about him and his resourcefulness to cope with its challenges.

Resources

wisc-iv.com website (especially the FAQs and the Technical Reports)

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