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WISC V

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Region One ESC

Top Enhancements

- 1. In addition to traditional paper and pencil, comes in a digital format, bringing the power of WISC-V to your tablet!
- 2. Increased coverage of cognitive processes related to SLD Identification.
- 3. Statistically linked to the KTEA-3 and the WIAT-III, with combination scoring reports available!
- 4. Presents a 5-Factor structure.
- 5. Shorter discontinue rules.
- 6. Supports a processing strengths and weakness analysis approach.
- 7. New special group studies.
- 8. Basic training included with the kit.
- 9. Decreased testing time to obtain FSIQ and primary index scores.
- 10.Briefer instructions, using developmentally appropriate language.

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Wechsler's View of Intelligence

"The global capacity of a person to act purposefully, to think rationally, and to deal effectively with his/her environment."

Wechsler, David (1939). *The measurement of adult intelligence.* Baltimore: Williams & Wilkins, p. 229.

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Measuring abilities…

…the attributes and factors of intelligence, like the elementary particles in physics, have at once collective and individual properties, that is, they appear to behave differently when alone from what they do when operating in concert.

--- Wechsler (1975)

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Measuring abilities…

What we measure with tests is not what test 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 around him and his resourcefulness to cope with its challenges.

--- Wechsler (1975)

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Update Theoretical Foundations

- Consideration of current
  - Structural Intelligence Models
  - Neurodevelopmental & Neurocognitive research
  - Working Memory Models & research

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Update Theoretical Foundations

- Increase breadth of construct coverage by
- investigating and developing:
  - visual spatial subtest
  - fluid reasoning subtest
  - visual working memory subtest
  - subtests to measure additional processes
- related to learning (naming facility, associative memory)
- to measure additional cognitive processes relevant to learning disabilities

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Increase Developmental Appropriateness

- Instructions
  - Reduce vocabulary level, verbosity
    - "Advantages" and other high vocabulary level of items on Comprehension
  - Demonstrate, practice, and teach the task
- Instructions contain fewer words; less time to present
- Scoring criteria
  - Emphasis on response meaning; not precise content
- Time bonuses
  - Reduced items with bonuses on BD

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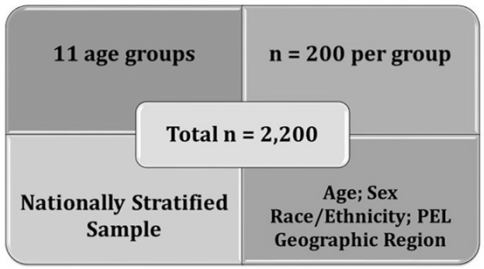
Increase User Friendliness

- Item security
- Materials
  - Scoring templates
- Directions
  - More explicit & simpler
  - For example, invalidation, proration & substitution rules
- Discontinue rule
  - 3 consecutive scores of 0 on primary tests
- Overall Testing time

Reduce Testing Time

- FSIQ subtests does not include all Primary Index subtests
- 5 primary index scores: 65 minutes mean
  - (10 minutes shorter than WISC-IV mean)
- FSIQ: 48 minutes mean
  - (27 minutes shorter than WISC-IV mean)
- Shorter discontinue rules, fewer items, selecting subtests with briefer admin time to contribute to these scores

WISC-V Normative Sample



WISC-V Normative Sample and Special Education Population

Percentages of Normative Sample and U.S. Population by Special Education Classification		
Special Education Classification	**Normative Sample**	**U.S. Population**
Developmental Delay	0.6	0.7
Intellectual Disability	1.6	0.9
Specific Learning Disability	1.7	4.9
Speech/Language Impairment	1.5	2.9
Attention-Deficit/Hyperactivity Disorder	1.1	5.0
Gifted and Talented	1.7	6.7

Standard Errors of Measurement

Composite	Overall Average SEM
VCI	4.22
VSI	4.36
FRI	3.89
WMI	4.26
PSI	5.24
FSIQ	2.90
QRI	3.47
AWMI	3.92
NVI	3.23
GAI	3.07
CPI	4.12

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Special Group Studies

Intellectually Gifted	Attention-Deficit/ Hyperactivity Disorder
Intellectual Disability-Mild Severity	Disruptive Behavior
Intellectual Disability-Moderate Severity	Traumatic Brain Injury
Borderline Intellectual Functioning	English Language Learners
Specific Learning Disorders	Autism Spectrum Disorder

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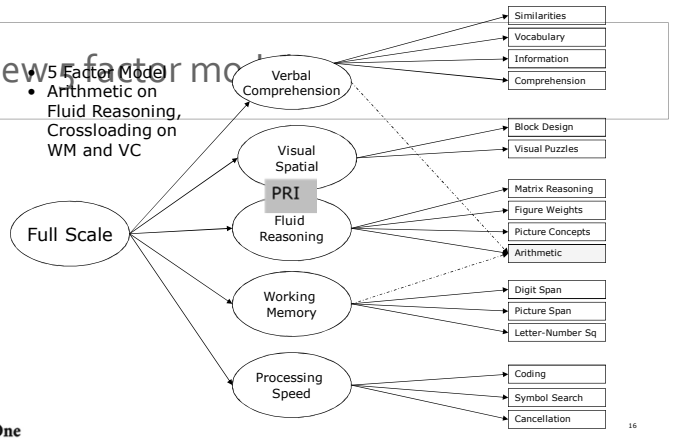
WECHSLER INTELLIGENCE SCALE FOR CHILDREN® - FIFTH EDITION

Test Structure

New 5-factor mo

- 5 Factor Model
- Arithmetic on Fluid Reasoning, Crossloading on WM and VC



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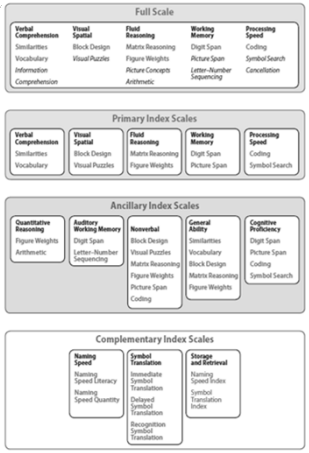
WISC-V Framework



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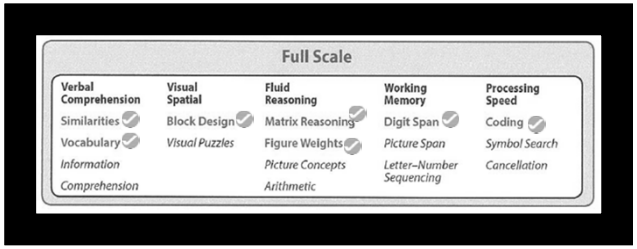
Test Structure – Full Scale IQ (7 subtests)



New Terminology
blue = **Primary** (Core)
italics = **Secondary** (Supplemental)

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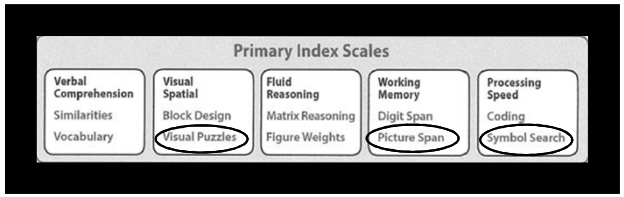
Test Structure – Primary Index Scales



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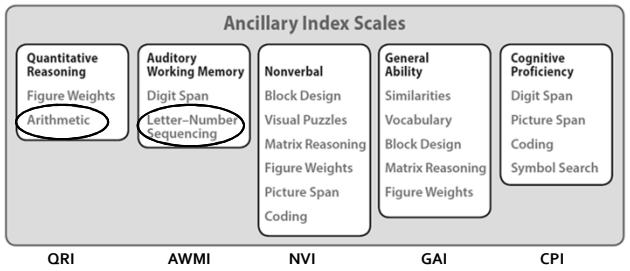
Test Structure Ancillary Index Scales

(for clinical conditions)



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Quantitative Reasoning Index (QRI)

- Measures ability to perform mental math operations and understand quantitative relationships
- may be of special interest if child is suspected of having a specific learning disability in mathematics

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Auditory Working Memory Index (AWMI)

- Ability to register, maintain and manipulate information presented verbally
- Purer measure of auditory working memory relative to the WMI
- domain-specific storage components may be related to various clinical conditions

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Nonverbal Index (NVI)

Not language free

- Measure of general intellectual ability that **minimizes expressive language** demands
- Use with ELL, DHH, ASD w/ language impairment
- When DSM–5 requires nonverbal measure of ability to meet diagnostic criteria:

-if a diagnosis of ID is established and a comorbid diagnosis of language disorder is being considered

-if child is language impaired AND being considered for a diagnosis of ID, AND you cannot obtain valid scores on the VCI to get an FSIQ, use Nonverbal Index alternative

(Raiford & Coalson, 2014)

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General Ability Index (GAI)

- Estimate of general intellectual ability that *excludes working memory and processing speed* subtests
- Why GAI? Lower FSIQ score may mask meaningful differences between general cognitive ability (represented by FSIQ) and other cognitive functions (e.g., achievement, memory)
- Evaluate GAI scores vs FSIQ when testing children suspected of neurodevelopmental disorders- ADHD, language disorders, ASD
- NAGC position paper recommends use of the GAI in gifted evaluations

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Cognitive Proficiency Index (CPI)

- Estimate of efficiency with which information is processed in the service of learning and reasoning
- Comprised of WM and PS tasks- Working memory and processing speed are related in that working memory involves identification, registration, and manipulation of information in short-term memory, and processing speed relates to how quickly you can register that information into STM.
- Low CPI seen w/LD

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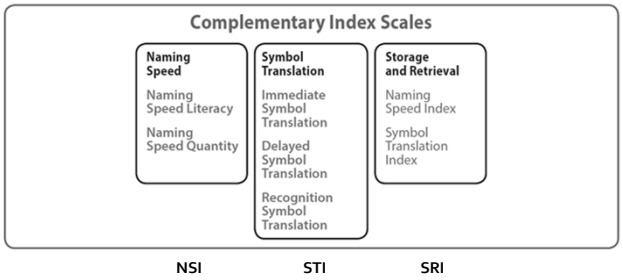
Test Structure- Complementary Index Scales



M=100; SD=15

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Naming Speed Index (NSI) *Literacy & Quantity*

- estimate of **automaticity of basic naming ability**
- developed to enhance the assessment of children with suspected learning disabilities
- closely associated with *reading and spelling* skill development, and has shown sensitivity to reading disabilities
- Closely associated with *math* skill development, and has show sensitivity to math disabilities
- Also sensitive to other neurodevelopmental conditions - ADHD, language disorders, ASD
- not developed as a measure of intellectual ability

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Symbol Translation Index (STI) *Immediate, Delayed, Recognition*

- broad estimate of **visual-verbal associative memory**
- Skill is related to *reading* decoding, word reading accuracy and fluency, text reading, and reading comprehension
- related to *math* calculation and math reasoning
- developed to enhance the assessment of individuals suspected of having learning problems or declarative memory impairment.
- sensitive to dyslexia
- not developed as a measure of intellectual ability

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Storage and Retrieval Index (SRI)
(based on the sum of standard scores for the NSI and the STI)

- broad estimate of long-term storage and retrieval accuracy and fluency derived from a variety of tasks that assess cognitive processes associated with reading, mathematics, and writing
- Long-term storage and retrieval is related to reading, math and writing disabilities

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Complementary Scales NSI & STI

Total Raw Score to Standard Score Conversion

Process Score	Raw Score	Standard Score
Naming Speed Literacy		
Naming Speed Quantity		
Immediate Symbol Translation		
Delayed Symbol Translation		
Recognition Symbol Translation		
		Naming Speed / Symbol Trans.

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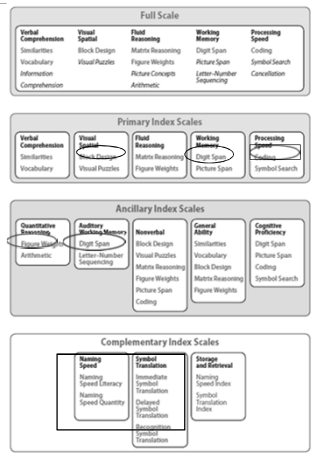
WISC-V Framework



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Standard Subtest Administration Order

- Alternating indices
- Maintain interest
- FSIQ 1st

Table 2.4 Standard Subtest Administration Order

1. Block Design
2. Similarities
3. Matrix Reasoning
4. Digit Span
5. Coding
6. Vocabulary
7. Figure Weights
8. Visual Puzzles
9. Picture Span
10. Symbol Search
11. Information
12. Picture Concepts
13. Letter–Number Sequencing
14. Cancellation
15. Naming Speed Literacy
16. Naming Speed Quantity
17. Immediate Symbol Translation
18. Comprehension
19. Arithmetic
20. Delayed Symbol Translation
21. Recognition Symbol Translation

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SU ND

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Substitution

FSIQ

Is the only score where substitution is permitted

FSIQ – allowable substitutions

FSIQ Subtest	Allowable Substitutions for Deriving the FSIQ*
Similarities	Information or Comprehension
Vocabulary	Information or Comprehension
Block Design	Visual Puzzles
Matrix Reasoning	Picture Concepts
Figure Weights	Picture Concepts or Arithmetic
Digit Span	Picture Span or Letter–Number Sequencing
Coding	Symbol Search or Cancellation

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Proration

- May prorate to 6 subtests (from 7)
- NO Proration for anything but FSIQ

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Warning - reminder

Can EITHER prorate FSIQ with 6 subtests
OR can Substitute 1 subtest.

CANNOT DO BOTH!

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Maximum Number of Subtests with Raw Scores of 0

Permitted:

FSIQ = FOUR out of SEVEN (if prorated to 6, then only 3)

Primary Index Scales = 1 out of 2

Ancillary Index Scales (QRI, AWMI) = 1 out of 2

NVI = 3 out of 6

GAI = 3 out of 5

CPI = 2 out of 4

STI = 2 out of 3

If NSI or STI is missing do not compute SRI

Free Trial

- http://www.hellog.com/home.html

Training URLs

- See Document

References

- Pearson Clinical-WISC V Presentation

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