Q-interactive Q&A

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Q-INTERACTIVE RESEARCH
WISC-V

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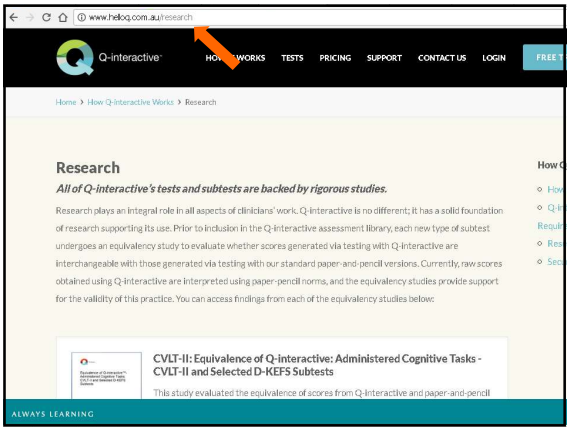
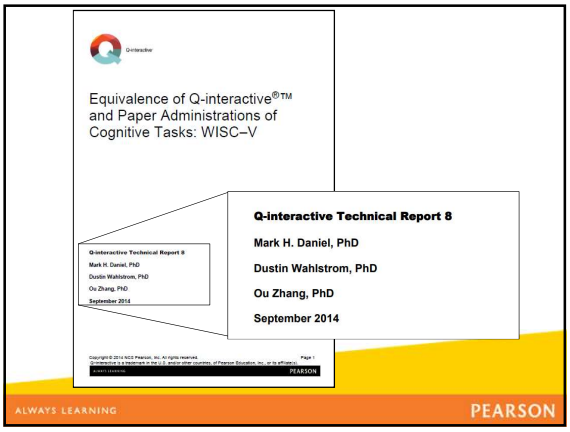
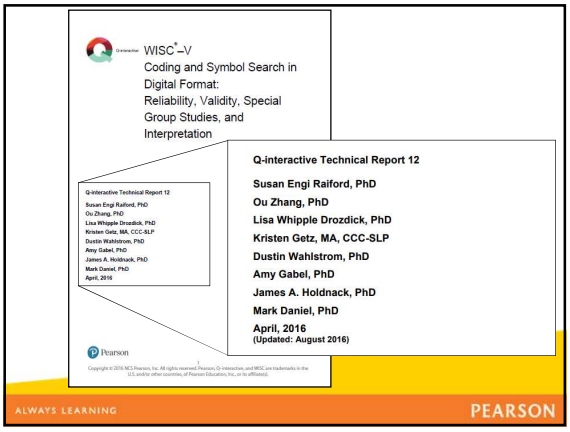




Study Results – "traditional" subtests

Table 3 Effect size of Q-interactive format on each WISC–V subtest

Subtest	*R*	Unstand. Regression Weight	*t*	Effect Size	WISC–IV Effect Size
Arithmetic	.55	−0.49	−2.11*	−0.16	0.10
Block Design	.58	0.59	2.66**	0.20	0.02
Comprehension	.55	−0.59	−2.51*	−0.20	0.00
Digit Span	.54	0.25	1.04	0.08	0.13
Figure Weights	.52	0.49	1.95	0.16	—
Information	.71	−0.15	−0.68	−0.05	0.07
Letter-Number Sequencing	.50	0.26	1.13	0.09	0.18
Matrix Reasoning	.48	0.51	1.99	0.17	0.27
Picture Concepts	.40	0.07	0.22	0.02	0.21
Picture Span	.42	0.21	0.83	0.07	—
Similarities	.66	0.11	0.50	0.04	0.02
Visual Puzzles	.52	0.11	0.46	0.04	—
Vocabulary	.66	−0.39	−1.69	−0.13	0.05



Study Results – digital subtests (PSI)

Table 9. Coding and Symbol Search Format Equivalence

	Paper				Digital				
	Raw Score		Scaled Score		Raw Score		Scaled Score		
Subtest	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Standard Difference
Coding	44.5	20.1	9.5	2.9	37.1	10.2	10.2	3.0	0.23
Symbol Search	28.4	9.7	10.9	3.1	29.5	9.3	10.5	3.0	-0.13

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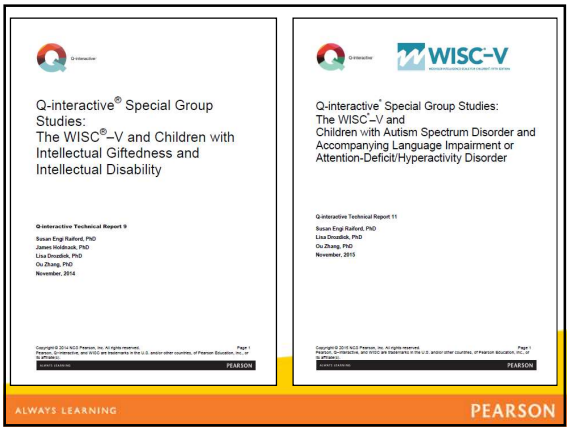

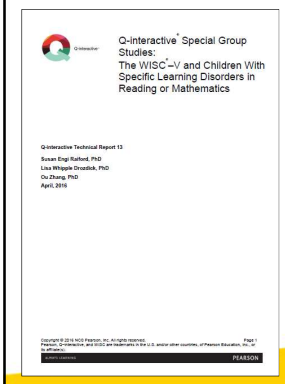

Conclusions

The scores obtained by children in the special group studies are **consistent** with their previous group identifications and the results of other comparison studies.

The consistency of results observed across digital and paper formats indicates the **target constructs** are not altered by varying the administration format

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Interpretation

A slight adjustment to interpretive statements may be helpful when discussing score differences between Coding and Symbol Search and composite scores that involve Coding. With the digital format of Coding, the most salient point is that some of the graphomotor demands of Coding have been removed; therefore, the usual reference or hypothesis that differences between Coding and Symbol Search may be attributable to the graphomotor demands is likely not warranted. However, psychomotor speed continues to be involved with both subtests. Given the continued low performance of the motor impairment group, it is possible that observed differences between Coding and Symbol Search may be more related to task complexity and associative learning as opposed to graphomotor speed.

In addition, Coding responses are now collected within a multiple-choice format, so rotation errors are no longer possible. Therefore, base rates for rotation errors cannot be provided for the digital format. To account for these changes, adjustments have already been made to the interpretive reports that can be generated within Q-interactive.

Cancellation, which is still administered using a paper response booklet, still may be substituted for Coding to obtain the FSIQ. As with any substitution, it is important to note the impact on interpretation of the FSIQ. Specifically, Cancellation has graphomotor demands whereas Coding does not any longer. However, both subtests have been show to load on Processing Speed, and substitution continues to remain an appropriate use for the Cancellation subtest.

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However…

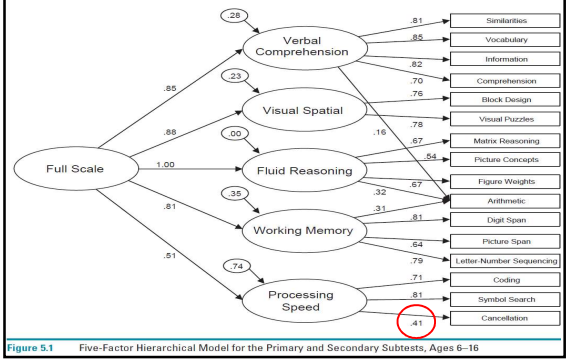
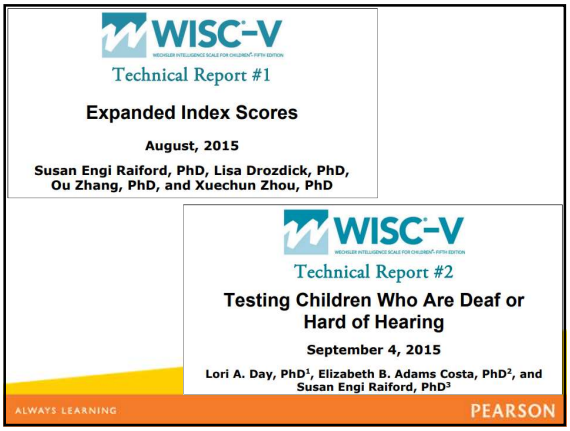


Figure 5.1 Five-Factor Hierarchical Model for the Primary and Secondary Subtests, Ages 6–16



WISC®-V

Technical Report #3

Using the WASI®–II with the WISC®–V

January, 2016

Susan Engi Raiford, PhD, Xuechun Zhou, PhD, and Lisa Whipple Drozdick, PhD

WISC®-V

Technical Report #4

WISC–V Special Group Study: Children With Hearing Differences Who Utilize Spoken Language and Have Assistive Technology

September, 2016

Elizabeth B. Adams Costa, PhD[1], Lori A. Day, PhD[2], and Susan Engi Raiford, PhD[2]

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Research

All of Q-interactive's tests and subtests are backed by rigorous studies.

Research plays an integral role in all aspects of clinicians' work. Q-interactive is no different; it has a solid foundation of research supporting its use. Prior to inclusion in the Q-interactive assessment library, each new type of subtest undergoes an equivalency study to evaluate whether scores generated via testing with Q-interactive are interchangeable with those generated via testing with our standard paper-and-pencil versions. Currently, raw scores obtained using Q-interactive are interpreted using paper-pencil norms, and the equivalency studies provide support for the validity of this practice. You can access findings from each of the equivalency studies below:

CVLT-II: Equivalence of Q-interactive: Administered Cognitive Tasks - CVLT-II and Selected D-KEFS Subtests

This study evaluated the equivalence of scores from Q-interactive and paper-and-pencil

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Equivalence of Q-interactive™ and Paper Scoring of Academic Tasks: Selected WIAT®–III Subtests

Q-interactive Technical Report 5

Mark H. Daniel, PhD
Senior Scientist for Research Innovation

August 2013

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Study Results

Table 3 Differences between standard scores obtained using paper and Q-interactive recording formats

Subtest and Score	Paper Scoring N	Paper Scoring Mean	Paper Scoring SD	Q-interactive Scoring N	Q-interactive Scoring Mean	Q-interactive Scoring SD	Difference	z	Effect size
Oral Reading Fluency									
Fluency	35	98.1	9.5	36	97.4	9.3	–0.70	–0.48	–0.05
Accuracy	35	98.8	11.5	36	100.4	12.4	1.60	0.40	0.11
Rate	35	98.1	9.1	36	97.4	8.7	–0.70	–0.56	–0.05
Sentence Repetition	45	97.6	17.4	45	96.4	16.4	–1.20	–0.34	–0.08

Note. *N* is the number of scorings; Mean and *SD* are based on the distribution of within-administration means.

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DOES WISC-V SCATTER MATTER?

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Interpretative Considerations

- Multiple cognitive processes
- Number of processes invoked related to task difficulty
- Primary and ancillary measures are specifically designed to measure complex cognitive processes

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Interpretive "Mindset"

- Consider task demands of items and subtests
  - Input demands
  - Cognitive processing
  - Output demands
  - Selection of strategies
- Meaning comes from ***analysis***

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When should FSIQ be interpreted? What you may have heard in the past…

- Prifitera, A., et al *"As a general rule of thumb, we might suggest that a 20-point VCI-PRI discrepancy should raise red flags in the examiner's mind. A 20-point or greater VCI<PRI and VCI>PRI was obtained by 6.1% and 6.7%"*
- Kaufman & Flanagan *'Essentials of Assessment' books - "Is the size of the standard score difference less than 1.5 SD's (<23 points)? If YES, then the FSIQ may be interpreted….If NO, then the variation in the Indexes…are considered too great [to interpret]"*
- Sattler (Jerome) & Dumont *"Whether an occurrence is 'unusual' (ie low base rate) depends on how one defines the term…..We also suggest that a low base rate is one that occurs in 10-15% or less of the standardisation sample."*

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What about subtests?

- Clinicians have a tendency to interpret individual subtest scores obtained within a battery as if that subtest was given in *isolation*
- Subtest strengths and weaknesses are often attributed to a clinical syndrome, whether or not the individual has a disorder
- False assumption that if a child has variable subtest scores, then we can't interpret index scores or FSIQ (seen to be *invalid*)

However, if we administer enough subtests, something is bound to show up!

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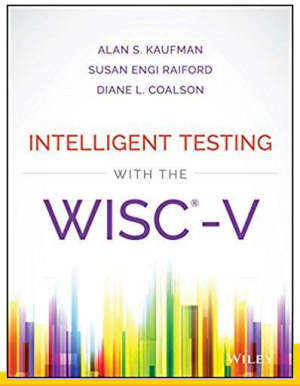

- 2016
- **Chapter 7**: Does WISC-V Scatter Matter?

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Study Results – Indexes

- Mean Index range = 25 (*SD* = 10) for normative sample
  - Mean Index range = 28.4 (*SD* = 10.2) for IG
  - Mean Index range = 20.9 (*SD* = 10.8) for ID
  - Mean Index range = ~24 (*SD* = 9) for SLD
  - Mean Index range = 28 (*SD* = 13) for ASD
- A **minimum difference of at least 39 points** is required between the highest and lowest index scores to denote unusual index scatter at the 10% base rate cut-off
- *Essentials of WISC-V Assessment* no longer suggests that 23-point ranges are uninterpretable!

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Study Results - Subtests

- Mean Subtest range = 7 (*SD* = 2.2) for normative sample
  - Mean Subtest range = 7.6 (*SD* = 2) for IG
  - Mean Subtest range = 5.7 (*SD* = 2.5) for ID
  - Mean Subtest range = ~6.8 (*SD* = 2) for SLD
  - Mean Subtest range = 7.7 (*SD* = 3) for ASD
- A **minimum difference of at least 11 points** is required between the highest and lowest subtest scores to denote unusual index scatter at the 10% base rate cut-off
- *Essentials of WISC-V Assessment* no longer suggests that 5-point ranges are uninterpretable!

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Discrepancies between Indexes

"We **do not** find sufficient evidence that there is a discrepancy beyond which the FSIQ becomes invalid, unreliable, or uninterpretable.

We do believe that [when this occurs] the FSIQ *alone* is insufficient to describe a child's intellectual abilities."

(p. 148 Essentials of WPPSI-IV Assessment)

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Discrepancies between Subtests

"An extreme discrepancy between the two subtests that make up an index…**does not** indicate that the score is **invalid** or **unreliable** or **should not be interpreted**.

Describe the index score as a summary of diverse abilities, understand the subtests scaled scores that contribute to the index score and interpret discrepancies based on that index score with caution."

(p. 167 Essentials of WPPSI-IV Assessment)

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Back to Kaufman…

- Substantial Index-level variability is normal, not abnormal (p.217)
- Subtest-level scatter analysis informs interpretation at higher levels and provides insight into the child's cognitive strengths and weaknesses (p.223)
- Use theory-based methods to translate differences to meaningful interventions (see reported case studies)

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WHAT FORMAT SHOULD I USE?

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Paper-pencil vs Q-interactive

- Behavioural issues
- Motor issues
- Time considerations
- Battery life
- Number of assessments
- Experience and knowledge of test (and testing)
- Personal choice!

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THE FUTURE OF Q-INTERACTIVE

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Where are we at?

- Test equivalency = manipulatives
- Also dictates which tests make it to Q-interactive (i.e. WPPSI-IV)
- Too far away from WISC-6 to know what to expect in terms of test structure
- Always based on research so any updates will reflect this plus market needs

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WIAT-III WISC-V

TROUBLESHOOTING

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Helpful hints

- pearsonclinical.com.au/digital_supports
- Webinars:
  - pearsonclinical.com.au/WISCV-A-NZ-iPad-Q-Interactive-signup
  - pearsonclinical.com.au/wiat-3-ipad

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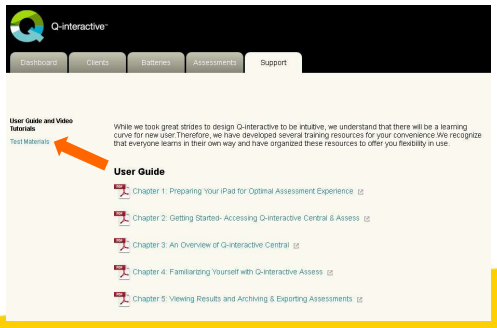
Support within Central



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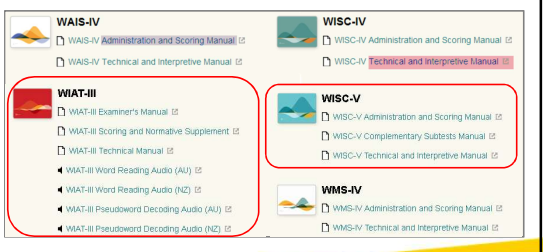
Support Tab – Test Materials



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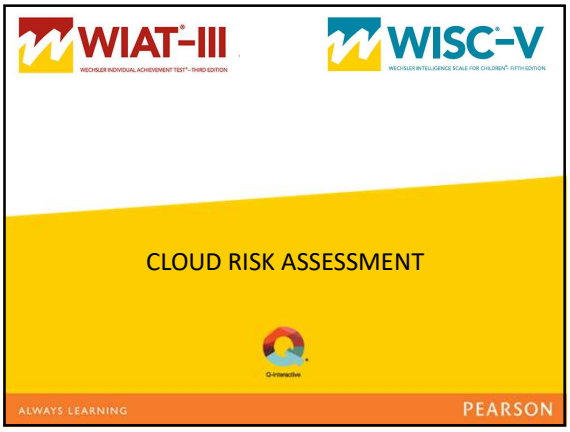
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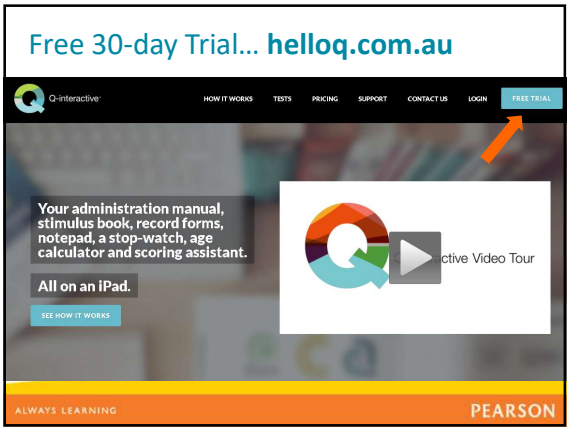
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