

WISC®–V Canadian Frequently Asked Questions

Test Framework, Revision Goals, and General Practice Issues

Q: How has the test structure changed?

A: Changes in the test structure include new and separate Visual Spatial and Fluid Reasoning index scores and new measures of visual spatial ability, quantitative fluid reasoning, visual working memory, rapid automatized naming/naming facility, and visual-verbal associative memory. To augment the primary index scores and the FSIQ, a number of new ancillary and complementary index scores are also available, such as quantitative reasoning, auditory working memory, naming speed, symbol translation (i.e., visual-verbal associative memory), and storage and retrieval index scores. The changes were influenced by contemporary structural models of intelligence, neurodevelopmental theory and neurocognitive research, clinical utility and factor-analytic studies.

The separation of Visual Spatial and Fluid Reasoning index scores results in greater interpretive clarity. The addition of visual working memory enhances the scale's clinical utility due to domain-specific differentiation of working memory abilities. The new naming facility and visual-verbal associative memory measures are related to achievement and sensitive to specific learning disabilities and a wide variety of other clinical conditions. These measures are useful in a pattern of strengths and weaknesses approach to specific learning disability identification.

Q: Was the WISC–V designed to line up with Cattell-Horn-Carroll (CHC) theory?

A: Theory was not the only consideration that influenced the development of the WISC–V, and no single theory determined its structure. Neurodevelopmental research and clinical utility were also important considerations when determining the WISC–V test structure. However, the WISC–V model reflects contemporary structural intelligence theories, such as CHC, and defensible theoretical perspectives and frameworks, including CHC theory, can be utilized in its interpretation.

Widely accepted structural intelligence models based on factor analytic results, such as CHC theory, provide overwhelming evidence for general intelligence at the top of a hierarchical model and for various related and distinguishable broad abilities at the level beneath. In some models, the specific abilities are each composed of various narrow abilities at the lowest level. Although evidence from structural models does not identically converge, most indicate that verbal comprehension, visual spatial, fluid reasoning, working memory, and processing speed abilities are among the important components, and these are the five primary index scores available for the WISC–V. The names of these factors vary, based on the taxonomy system used by a team of investigators; the CHC taxonomy provides names for these constructs (i.e., *Gc*, *Gv*, *Gf*, *Gsm*, and *Gs*, respectively). The Wechsler intelligence scales have evolved in response to these consistently observed factors, and the WISC–V continues this work by providing new measures of working memory and a new working memory composite, offering separate visual spatial and fluid reasoning composites, and improving upon the measure of verbal comprehension and processing speed while

continuing to offer composite scores for each. The WISC–V also includes a storage and retrieval index (SRI) that is analogous to *Glr* in the CHC taxonomy. When used together with an achievement measure, such as the WIAT–III, a number of other constructs are also measured, including aspects of auditory processing (i.e., *Ga*) within CHC theory.

Q: Is the WISC–V quicker to administer than the WISC–IV?

A: Yes. Substantial efforts were made during development to achieve the shortest testing time possible and still offer greater construct coverage and flexibility. As a result, administration time is shorter than that of the WISC–IV. For the primary index scores, administration time is approximately 10 minutes shorter than the WISC–IV with the same number of subtests (10). The FSIQ can be obtained about 25–30 minutes faster than the WISC–IV, however note that the WISC V FSIQ is comprised of 7 subtests whereas WISC-IV included 10 subtests. Because administration time is determined by the composite scores desired, it varies based on the practitioner’s choices. The WISC–V measures a number of other related constructs (e.g., rapid automatized naming, visual-verbal associative memory). If you opt to administer the measures related to these constructs, the testing time will be somewhat longer.

Q: Is there information in the *WISC–V Canadian Manual* about the proportions of children with various clinical conditions that were included in the normative sample? Are norms available that do not include children from these special groups?

A: As shown in Table 2.6 of the *WISC–V Canadian Manual*, representative proportions of children from various special education classifications were included in the normative sample. In addition to children with various clinical conditions, 2.8% of children with intellectual giftedness were also included to appropriately represent children with all levels of performance. The proportions of children from special education classifications are smaller than the Canadian population, however actual percentages are likely higher when you take into account undiagnosed and undisclosed conditions present in the normative sample. It is unlikely the inclusion of very small proportions of children with disabilities in the normative sample will result in more children scoring within the normal range. There are no separate norms that exclude these children.

Q: What are the recommendations for using the WISC–V over the WAIS–IV when evaluating examinees aged 16?

A: Because the age ranges of the WISC–V and the WAIS–IV overlap for examinees aged 16, practitioners have the option of choosing the appropriate measure for an examinee this age. For examinees suspected of below average cognitive ability, the WISC–V should be administered because of its lower floor at this age range. For examinees of high ability, however, the WAIS–IV should be considered because of its higher ceiling. For the examinee of average ability, the choice between the WISC–V and the WAIS–IV requires clinical judgment from the educational and/or psychological professional. The WISC-IV required the administration of 10 subtests to calculate the FSIQ and primary index scores, and the WISC V requires 10 subtests for the primary subtests but only 7 subtests for the FSIQ. Thus examinees who have difficulty completing a lengthier assessment may benefit if the WISC–V is used because it is somewhat faster to obtain both the primary index scores and the FSIQ. The WISC–V provides a Nonverbal Index that requires no expressive responses, which may be useful for examinees who are English language learners or who have expressive difficulties. The WISC–V provides some additional composite scores and a link to an achievement test that may be informative for certain referral questions (e.g., specific

learning disability). The reasons for referral, familiarity with the tests, and knowledge of the examinee's characteristics (e.g., attention span) should be taken into consideration.

Q: How long do professionals have to transition from using the WISC–IV to using the WISC–V?

A: Publications such as the current American Psychological Association (APA) Ethical Principles of Psychologists and Code of Conduct, the *Standards for Educational and Psychological Testing*, and *Assessment of Children: Cognitive Foundations* provide guidance about the use of obsolete tests. Most practitioners make the move to the new edition within 8–12 months of the release. Consider your own practice situation and how critical the evaluations you conduct are when making the decision. For example, in cases where the older edition is used, and an independent educational evaluation is requested, a school system may be at a greater risk of having results called into question.

Q: What is the appropriate composite score to use when evaluating for a specific learning disability using ability-achievement discrepancy analyses?

A: The FSIQ is generally the first choice for an ability-achievement discrepancy analysis, because it provides the broadest sample of behaviour. However, there may be other circumstances that influence your choice (e.g., significant discrepancies between index scores when a language disorder is suspected). In these situations, other scores might be appropriate (i.e., VCI, VSI, FRI, GAI, NVI).

Q: Does the WISC–V support use of a pattern of strengths and weaknesses approach to learning disability evaluation?

A: Yes, the WIAT–III Canadian score report on the Q-global™ platform can be used to evaluate a specific learning disability, using a pattern of strengths and weaknesses discrepancy analysis approach. The data are too complex to provide in a paper format; the scoring software must be used for this purpose. The reporting of PSW within the WIAT–III Canadian score report will be available for use in February 2015.

Q: Should I provide teaching on any teaching item to which the child responds incorrectly, or only for the first two items administered?

A: When the child responds incorrectly to a teaching item, teaching is provided regardless of the start point used or the child's age.

Q: I have noticed children getting correct answers but just after the time limit has expired. These children had the correct answers but were just somewhat slower in responding. Are these children penalized due to their slow processing speed rather than their cognitive abilities on these higher-level cognitive reasoning tasks? For any of the subtests, did the WISC–V standardization research compare the accuracy of answers versus just their time-based raw scores?

A: In early research phases of the project, data were collected with extended time limits. Analyses indicated the children who answered correctly after the time limit were of lower ability than children who answered before the time limit. There was often little benefit to extending the time, as few children could answer correctly after the time limit expired. Data were not collected with extended time limits at standardization because that would've given children more exposure to the items which could result in some additional procedural learning or practice that is not standard. Process observations to test the limits can be done at the end of all testing and described qualitatively in the report.

Figure Weights Process Approach and Arithmetic Process Approach will be offered with the WISC–V Integrated, which is due out in late 2015. Those are standardized subtests that offer additional time for items that were missed.

Q: I found a discrepancy between two scores that is rare and unusual, but I am unsure how to interpret it. Is there somewhere I can see specifics?

A: Every discrepancy that appears on the Record Form is described in chapter 6 of the WISC–V Canadian Manual.

Q: Is colour-blindness a factor on the WISC–V?

A: Color-blindness occurs in approximately 10% of the general population, and more commonly in males. We have made every effort to ensure our items, including those on the WISC–V, WPPSI–IV, WASI–II, WAIS–IV, WISC–IV, WPPSI–III, and WASI, are free of bias against these individuals. Items are reviewed by colour-blindness experts as well as individuals with colour-blindness during early stages of test development. In addition, acetate overlays have been utilized to give the test developers a visual representation of the stimuli as it appears to individuals with the various types of colour-blindness. Items are also copied in greyscale to check appearance to those with monochromatic colour-blindness. All items are also subjected to a colour-blindness simulation to check item appearance with every type of colour-blindness and to ensure that the intensity and saturation of colours are not overly similar and do not suggest different responses.

Q: When will extended norms be available for the WISC–V?

A: Extended norms are used by practitioners who are evaluating intellectually gifted children, to inform interpretation. Extended norms must be validated with a sample of children who are highly intellectually gifted, and that case collection takes some time because these children are rare. The validation sample is currently being collected. The WISC–V was released at the beginning of December, 2014, and the extended norms are planned for release approximately a year and a half after the initial release of the WISC–V.

Subtests

Q: Is teaching allowed on the sample items to ensure that children understand the expectations of the subtests?

A: Yes, many of the subtests have demonstration, sample, and teaching items built in to ensure the child understands the task. These items were added in response to the needs of thousands of children who participated in the development of the scale. Children with special needs were included among these participants.

Q: Why was Comprehension not chosen as a primary subtest? From a language perspective, it provides a richer sense of the child's ability to answer open-ended questions, a more authentic skill for real-life.

A: In the online basic training that is included with each kit, we describe in more detail the types of analyses that were conducted to make the decisions regarding which subtests would be primary and which would be secondary. To summarize, the team looked at psychometric properties such as floors, ceilings, reliability, validity, and construct coverage; clinical utility; demographic differences; user-friendliness; and feedback from practitioners

and customers. There is nothing that precludes administration of secondary subtests if a practitioner believes that useful information will be gathered for a particular child.

Q: Why was Word Reasoning dropped?

A: Word Reasoning was removed because of its construct overlap with Vocabulary, its lack of strong validity evidence as a fluid reasoning measure, and its high correlation with the Information subtest, which rendered it somewhat redundant psychometrically.

Q: Did you consider removing the time bonuses for Block Design?

A: If the time limits are removed, children who do not have the commensurate intellectual ability complete more items correctly. Removing the time bonuses on this subtest would result in a loss of the ceiling, greatly reduced reliability, and a much lower correlation with general intelligence. These issues greatly reduce the meaningfulness of scores that could be derived from the results. For practitioners who are interested in a score without time bonuses, a Block Design No Time Bonus (BDn) process score is available and can be compared with Block Design.

Q: Why was Picture Completion dropped?

A: Picture Completion was removed to decrease the emphasis on speed in the battery and to allow measurement of other constructs of interest (e.g., visual spatial ability, fluid reasoning, visual working memory, rapid automatized naming, visual-verbal associative memory).

Q: How does Block Design work with children with motor deficits such as cerebral palsy? Is there an alternative test?

A: Whether Block Design is appropriate depends on the severity of the motor impairment. Unless the child has severe motor impairment, they may be able to complete the task. You will need to evaluate the severity and impact of the motor impairment for each case. If Block Design cannot be administered, the Visual Puzzles subtest can be substituted to obtain the FSIQ. The VSI and some ancillary index scores may not be obtained in this situation.

Q: How does interpretation of Arithmetic change now that it is classified as a Fluid Reasoning subtest?

A: It would be inappropriate to interpret Arithmetic as a measure of only Fluid Reasoning or only Working Memory. That is why it does not contribute to any primary index score. Arithmetic hasn't changed—it measures what it has always measured. What has changed is the clarity with which it is understood. The visual-spatial emphasis of the PRI obscured Arithmetic's strong relationship with the fluid reasoning component of that scale. The new test structure means that Arithmetic may be more useful for hypothesis testing than as an indicator of a broad ability. Arithmetic has always been a highly *g*-loaded and factorially-complex subtest.

Confirmatory factor analysis proceeds from theory. Based upon current theory, a 5-factor model, with Arithmetic loading on the Fluid Reasoning factor, was tested and provided a better fit. The factor loadings shift somewhat due to the new WISC-V subtests. The confirmatory factor analysis in the *WISC-V Canadian Manual* demonstrates that models with Arithmetic loading on the Working Memory factor also had merit and provided a good fit. There is a new visual working memory subtest in the WISC-V, whereas all of the Working

Memory subtests in prior versions were verbally presented. This may account for some portion of the shift, because Arithmetic is also verbally presented. When more fluid reasoning and visual spatial subtests and the new visual working memory subtest were present, the PRI split into the Visual Spatial factor and the Fluid Reasoning factor.

WISC-V Arithmetic has a substantial cross loading on the Working Memory factor, but it has a slightly higher loading on the Fluid Reasoning factor. It also has a cross loading on the Verbal Comprehension factor. Neurocognitive research shows that fluid reasoning and working memory both involve the prefrontal cortex. Furthermore, a great deal of empirical literature supports that they are related abilities.

With the new classification, interpretation at the subtest level could be presented in a more nuanced manner, rather than conceptualizing Arithmetic as a pure measure of a single ability. The WMI is intended to provide information about working memory ability, but the WISC-V subtests are thought to measure a number of different aspects of cognitive ability; they are not pure measures of the abilities represented by the factors on which they fall. Interpretation may vary depending on the particular examinee and will be nuanced based on the relationship among measures, response processes, and clinical information. For example, if the examinee has significant language problems, you are likely to see lowered scores on Arithmetic because of the impact of language comprehension on the test. If the examinee has significant deficits with math operations, that is, a math disability or low ability on measures of math computation, then low Arithmetic scores are likely associated with that problem. If the examinee has intact language and computational skills, low scores may be due to quantitative reasoning, that is, they don't know how to solve math problems or how to figure out what steps or what calculations are needed. In these circumstances, Figure Weights could provide more information. As another example, if the patient has low working memory ability, then Arithmetic will be low because of problems manipulating information in working memory. Digit Span Backward and Digit Span Sequencing or Letter-Number Sequencing could provide some information to support this hypothesis.

A number of articles have been published showing that the WISC-IV may be interpreted with the new 5-factor model, and Flanagan and Kaufman's *Essentials of WISC-IV Assessment* has several chapters that cover the interpretation of the Wechsler intelligence scales from this perspective.

Q: Are the Comprehension items updated?

A: As part of any revision, items that may require revision are identified for various reasons (e.g., length of time in use, cultural shifts, wording, vocabulary level, and relevance). There have been modifications to the Comprehension items to make them culturally relevant and internationally portable, as well as more child-friendly. For example, more questions related to child-relevant content appear on the WISC-V, and no item contains the word "Advantages" any longer.

Q: I tested a child aged (6, 7, or 8) and the Naming Speed Quantity score came out unusually high. Did I make a scoring error?

A: Check to ensure you are in the **NSQ** column in the norms table in the *WISC-V Canadian Manual Supplement*. Some examiners mistakenly apply the column from the NSco, NSsco, or NSIn process scores to their NSQ results and obtain unusually high scores as a result.

Q: Are there out of level norms for children with low cognitive ability on Naming Speed Literacy (i.e., for those who don't know the names of all the letters and numbers)?

A: Out of level norms are not provided, because the construct being measured by the task is changed if the child does not know the words. Do not administer this item if the child does not know letters and numbers. For children aged 7–8, it is still possible to obtain a process score on WISC–V Naming Speed Size-Colour-Object without Naming Speed Letter-Number. WISC–V Naming Speed Quantity may also be administered in this situation, but the Naming Speed Index and the Storage and Retrieval Index cannot be obtained. For children aged 9–16 who do not know the names of letters or numbers, another object- or shape-naming task (e.g., from KTEA–3 or NEPSY–II) could be used as well.

Q: How will colour blindness be handled in the Naming Speed Literacy subtest?

A: Individuals with colour-perception differences are a group that encompasses greater than 10% of the general population. These issues are much more common in males. We have made every effort to ensure our items, including those on the WAIS–IV, WISC–V, WPPSI–IV, and WASI–II, are free of bias against these individuals. Items are reviewed by colour-perception differences experts, as well as individuals with colour-perception differences, during the early stages of the test development process. In addition, acetate overlays have been utilized so that the test developers can understand the appearance of the stimuli to individuals with various colour-perception differences. Items are also copied in black and white to check appearance to those with monochromatic colour perception. All items are also subjected to an electronic “colour-blindness” simulator to check item appearance with every type of colour-perception difference and ensure that the intensity and saturation of colours are not confused or result in different responses. For the WISC–V, the colours are yellow, blue, and red; green is not included. This means that for the most common colour blindness (green/red, which is 7%-10% of boys), children should be able to take it without a problem. Children with monochromacy (0.00001% of children) should not be administered the WISC–V Naming Speed Literacy items that involve colours; however, they could take Item 3 (Letter–Number) and the Naming Speed Quantity subtest. For children with deuteranopia (1%), the simulation, template, and expert review indicate that they should be able to see the differences between the yellow and blue.

Q: For the BDp score, if a child has to take both trials of an item, do you use the correct placement of blocks on Trial 2 only to get the optional partial score for that item?

A: Only the last trial administered is counted.

Q: For the BDp score, if a child has the correct design but rotates it 30 or more degrees, is the optional partial score for that item equal to 0?

A: Yes.

Q: For the BDp score, if a child commits a dimension error, which blocks are counted as correct?

A: Count the blocks that are in the correct position, but not the ones involved in the dimension error.

Q: For Naming Speed Literacy, the top table on the Process Analysis page of the Record Form provides a space to complete the NSLn raw score and scaled score. However, it indicates that this is for ages 7–8 in light blue ink within the boxes. Is this also where the NSL raw score for ages 9–16 is converted for this age group? If not, where else on the Record Form would you convert the NSL raw score for ages 9–16?

A: The NSL score is converted on the top right corner of the Ancillary and Complementary Analysis page using the Total Raw Score to Standard Score Conversion table. Refer to Steps 3–4 on pages 70–71 of the WISC–V Administration and Scoring Manual.

Q: If a young child is prompted to use finger tracking and they do not comply, what is the proper course of action?

A: In this situation continue providing the prompt until the child complies. The sample items provide ample opportunity for the child to practice until he or she is accustomed to finger tracking.

Q: On Visual Puzzles, if a child clearly chooses more than 3 pieces, what prompt is provided?

A: “Which 3 pieces do you mean?” See the sixth bullet on page 170 of the WISC–V Administration and Scoring Manual.

Q: In testing a child between the ages of 6:0–7:11, I have obtained an extremely low score on the NSQ score that doesn’t make any sense. Is there a problem with this score?

A: Check to be sure that you are looking at the correct column in Table C.6 of the WISC–V Canadian Manual Supplement. These ages have process scores for NSsco and NSln, and the columns are between the NSL and NSQ columns. Using the incorrect column can result in erroneous, abnormally high scores on NSQ.

Q: Why are there certain WIAT-3 subtests that do not have a correlation with the WISC-V for the AAD analysis (e.g., p 218 of the WISC V CDN manual)??

A: Table E.1 in the WISC–V Canadian Manual reports correlations between WIAT–III subtest and composite scores with WISC–V composite scores. These correlations are used in the calculation of an Ability-Achievement Discrepancy using the predicted-difference method. The predicted-difference method is a regression-based discrepancy technique that uses the intellectual ability score in a regression equation to predict the expected achievement score for a child. However when the correlation between the achievement and ability measures is low (such as $< .40$), the regression to the mean effect is strong for extremely low or high scores. For this reason, correlations lower than $.40$ are not reported in the table, and clinicians must instead use either the simple-difference method for an AAD analysis or a Pattern of Strengths and Weakness approach. For more information see pages 107–112 of the WISC–V Canadian Manual.

Composite Scores

Q: How is the WISC–V FSIQ different than the WISC–IV FSIQ?

A: The WISC–V FSIQ and the WISC–IV FSIQ differ in some respects. The WISC–V FSIQ is based on seven subtests: Similarities, Vocabulary, Block Design, Matrix Reasoning, Figure Weights, Digit Span, and Coding. Compared with the WISC–IV FSIQ, the WISC–V FSIQ assigns a relatively lighter weight to working memory and processing speed abilities, as only

one subtest from each of these domains are included. Therefore, somewhat less emphasis is placed on working memory and processing speed.

Q: What is the fundamental difference between the FSIQ and the primary index scores?

A: The FSIQ is usually considered the score that is most representative of general intellectual functioning (*g*). The primary index scores (e.g., VCI, VSI, WMI) represent intellectual functioning in specified cognitive areas (e.g., verbal comprehension, visual-spatial ability, working memory). The FSIQ is derived from a subset of the subtests that contribute to each primary index score.

Q: If there are significant discrepancies between the primary index scores (e.g., VCI, WMI), is the FSIQ still interpretable (e.g., for diagnosing intellectual disability)?

A: Research suggests that even when a cognitive ability composite score, such as the FSIQ, is based on disparate abilities, it still has predictive validity. Best practice suggests that you conduct a complete discrepancy analysis (looking at statistical and clinical significance of strengths and weaknesses) and conduct additional assessments (e.g., adaptive behaviour, social and emotional functioning) to fully understand a child's needs. There may be times where there are such statistically and clinically significant discrepancies in a child's profile that the FSIQ does not represent a unitary construct; however, this does not render the score *invalid*. Rather, the FSIQ may not tell you everything that you need to know to plan appropriately for a child. In most cases, abundant information regarding treatment needs can be gained from the various primary and ancillary index scores (and other information) available. You will also need to consider the child's culture, language, and background and to consult your local guidelines for eligibility in making a determination.

Q: What does the Fluid Reasoning Index (FRI) measure?

A: The FRI measures the child's ability to detect the underlying conceptual relationship among visual objects and to use reasoning to identify and apply rules. Identification and application of conceptual relationships in the FRI requires inductive and quantitative reasoning, broad visual intelligence, simultaneous processing, and abstract thinking. The subtest composition of the FRI differs from the WISC-IV PRI. Matrix Reasoning is the only common subtest, contributing to the FRI that contributed to the WISC-IV PRI. Block Design and Picture Concepts, which contributed to the WISC-IV PRI, are not included. Figure Weights, a new subtest on WISC-V, contributes to the FRI. Compared with the WISC-IV PRI, the WISC-V FRI emphasizes abstract conceptual reasoning more and construction abilities requiring visual-perceptual integration and visual-spatial reasoning less.

Q: What does the Working Memory Index (WMI) measure?

A: Contemporary research indicates that working memory is an essential component of other higher-order cognitive processes. The WMI measures the child's ability to register, maintain, and manipulate visual and auditory information in conscious awareness. Registration requires attention, auditory and visual discrimination, and concentration. Maintenance is the process by which information is kept active in conscious awareness, using the phonological loop or visual sketchpad. Manipulation is mental resequencing of information based on the application of a specific rule. The subtest composition of the WMI differs from the WISC-IV WMI. Digit Span is the only common subtest, contributing to the WMI that was also in the WISC-IV WMI. It has been substantially revised for the WISC-V to increase the working memory load by adding a new sequencing condition. Letter-Number Sequencing, which contributed to the WISC-IV WMI, has been replaced with Picture Span, a

new visual working memory subtest in WISC–V. Compared with the WISC–IV WMI, the WISC–V WMI emphasizes visual working memory more and auditory working memory less.

Q: What is the difference between primary index scores, ancillary index scores, and complementary index scores?

A: The 13 index scores available on the WISC–V can be subdivided into three categories: primary, ancillary, and complementary. The five *primary index scores* are derived from administration of the 10 primary subtests, supported by factor analysis, and are theoretically and clinically driven. They are recommended for a comprehensive evaluation of cognitive ability that includes the Verbal Comprehension Index, Visual Spatial Index, Fluid Reasoning Index, Working Memory Index, and Processing Speed Index. The *ancillary index scores*, including the Quantitative Reasoning Index, Auditory Working Memory Index, Nonverbal Index, General Ability Index, and Cognitive Proficiency Index, are derived from combinations of primary subtests or primary and secondary subtests, and they provide additional information regarding a child’s cognitive abilities and WISC–V performance. The complementary index scores are the Naming Speed Index, Symbol Translation Index, and Storage and Retrieval Index. They are derived from administration of the complementary subtests, and provide further information about other cognitive abilities that may be assessed if the clinical need is present. These tasks were developed to enhance the assessment of children with suspected learning disabilities and are not designed as measures of intellectual ability.

The ancillary and complementary index scores are described below.

Ancillary Index Scores

Quantitative Reasoning Index (QRI) – The QRI is derived from the sum of scaled scores for the Figure Weights and Arithmetic subtests, and is an indicator of the child’s quantitative reasoning skills.

Nonverbal Index (NVI) – Offers an estimate of overall ability for children using subtests that do not require *any* verbal responses. Due to the relatively reduced verbal demands of its contributing subtests, the NVI may offer a more appropriate estimate of overall ability than the FSIQ for children with expressive issues or with clinical conditions associated with expressive language issues (e.g., autism spectrum disorders) or who are English language learners.

General Ability Index (GAI) – Provides an estimate of general ability that is less reliant on working memory and processing speed compared with the FSIQ.

Cognitive Proficiency Index (CPI) – Provides an estimate of the efficiency with which cognitive information is processed in the service of learning, problem solving, and higher order reasoning.

Complementary Index Scores

Naming Speed Index (NSI) – Provides a broad estimate of the automaticity of basic naming ability, drawn from a variety of tasks.

Symbol Translation Index (STI) – provides a broad estimate of visual-verbal associative memory, drawn from a variety of conditions.

Storage and Retrieval Index (SRI) – provides a broad estimate of long-term storage and retrieval accuracy and fluency, derived from a variety of tasks designed to measure cognitive processes that are associated with reading, mathematics, and writing skills, and have shown sensitivity to specific learning disorders and other clinical conditions.

Q: Is the NVI recommended for students with varying degrees of communication deficits? Could you use the NVI to determine eligibility for students who are nonverbal?

A: The NVI may be especially useful in these types of situations. Refer to the special group studies in Chapter 5 of the U.S. *WISC-V Technical and Interpretive Manual* included in your kit and to the appropriate interpretive section in Chapter 5 of the Canadian Manual for more information. Ability-achievement discrepancy analyses, using the NVI with the WIAT-III can be conducted using the tables in Appendix E of the *WISC-V Canadian Manual*.

Q: What is the difference between the FSIQ and the GAI?

A: The GAI provides an estimate of general intellectual ability that is less impacted by working memory and processing speed than the FSIQ. Children with neurodevelopmental disorders associated with difficulties in working memory and processing speed, such as learning disabilities, ADHD, Language Disorder, or autism spectrum disorder, may obtain lower FSIQ scores than children without such difficulties. In these situations, the lower FSIQ score may mask meaningful differences between general cognitive ability (represented by the FSIQ) and other cognitive functions (e.g., achievement, memory, and specific neuropsychological functions). The GAI was developed to help practitioners with the identification of relative strengths and weaknesses that are based on comparisons between general ability and other cognitive functions. Compared with the FSIQ, the GAI provides the practitioner with an estimate of general intellectual ability that is less sensitive to the influence of working memory and processing speed by excluding those subtests. The FSIQ can be compared to the GAI to assess the effects of a weakness in cognitive proficiency (as measured by the working memory and processing speed subtests) on the child's overall cognitive functioning. In some situations, it may be appropriate to use the GAI for score comparisons with measures of achievement or other cognitive functions. An evaluation of the significance and frequency of GAI-FSIQ differences may inform decisions about when to use the GAI in specific clinical situations.

Q: Are there data for the gifted population and frequency of GAI minus CPI differences?

A: There is not an analogous table that reports these data by special group. Table C.11 in the *WISC-V Canadian Manual Supplement* reports this information by total sample and by ability level. One portion of this table reports the information for children with $GAI \geq 120$.

Q: If I substitute a subtest when I derive the FSIQ, is it considered a standard administration?

A: No. Because this procedure estimates performance on a primary subtest using a secondary subtest, the results should be interpreted with caution and considered non-standard.

Q: Can I substitute a secondary subtest for a primary subtest when deriving the FSIQ?

A: A maximum of one substitution may be made when deriving the FSIQ only. No substitutions can be made for any other composite score. The potential FSIQ substitutions are limited in order to constrain additional measurement error that may be introduced by this practice. Table 2.8 in the *WISC-V Administration and Scoring Manual* indicates allowable substitutions for deriving the FSIQ.

Q: How was it decided that one subtest score could or could not be substituted for another when deriving the FSIQ?

A: Because substituted subtests are being used as an estimate of performance on another subtest, only secondary subtests within the same cognitive domain that are highly related to the primary subtest can be substituted.

Q: Can I administer all of the primary and secondary subtests and choose to use the highest subtest scaled scores when computing the FSIQ?

A: No. When deriving the FSIQ, you can only substitute a secondary subtest for a primary subtest that is spoiled or invalidated, or for a specific clinical purpose. Secondary subtests can also provide additional information on cognitive functioning. If you need to substitute a secondary subtest in place of a primary subtest for deriving the FSIQ, it is best practice to decide this before you administer the subtest—not after you have derived scaled scores. Secondary subtests are also useful when the primary subtest scores that contribute to a primary index score are widely discrepant. In this situation, additional information from secondary subtests can help to shed light on factors that may contribute to such disparate results.

Q: Why isn't subtest substitution permitted on any of the index scores?

A: Because subtest substitution may introduce measurement error into derived composite scores, substitution is limited. The index scores are derived from fewer subtests than the FSIQ, therefore, the risk of such error is greater. If a secondary subtest substitutes for a primary subtest for the FSIQ, the Q-global™ scoring software will not allow calculation of the primary index score that the primary subtest contributes to.

Q: Is score proration still available?

A: Prorating is available for the FSIQ only. A maximum of one proration **or** substitution may be made when deriving the FSIQ. Proration and substitution may not be combined to derive an FSIQ.

Q: If the Naming Speed Literacy (NSL) standard score is 90, and the Naming Speed Quantity (NSQ) standard score is 92, how is the Naming Speed Index (NSI) 89 and in the Low Average range?

A: The NSI is not an average of NSL and NSQ, it's a sum of standard scores. Having low scores on both components (i.e., NSL and NSQ) leads to an even lower NSI because in the distribution, having low scores on both is rarer than having a low score on one subtest and an average score on the second subtest. If you are familiar with the statistical phenomenon of regression to the mean, then this will make sense. If not, think about an Olympic gymnast competing in the all-around. It is rare to see someone score a perfect 10 on every event. It is more common to see them score a perfect 10 on one event and 8s on the others. The same applies to low scores. There is a tendency for subsequent observations to be less extreme.

Kit Materials

Q: There are several manuals in my Canadian WISC–V kit; which manuals do I need to carry with me?

A: The *WISC-V Administration and Scoring Manual* is the only manual you need for administration of the WISC-V. The *Canadian Manual* is your primary scoring manual but is only needed during hand-scoring. The *Canadian Manual* contains all necessary tables for filling out the Summary and Primary Analysis pages of the Record Form. Likewise, the *Canadian Manual Supplement* contains all tables needed to fill out the Ancillary and Complementary Analysis and Process Analysis pages of the Record Form. However the *Supplement* is only needed if you choose to report ancillary and complimentary scores on the record form.

The *WISC-V Technical and Interpretive Manual* is only needed for reviewing results of the WISC-V standardization and special group studies in the U.S. This manual contains supplemental information that is useful during your initial review of the WISC-V. The information in the *Technical and Interpretive Manual* is meant to provide further evidence of the reliability and validity of the WISC-V. Additionally, if you have a valid clinical reason for choosing (in advance of testing) to use U.S. norms on a Canadian child, the *WISC-V Technical and Interpretive Manual* contains the necessary tables for hand-scoring the Record Form in these special circumstances.

Note that Appendix H in the *Canadian Manual* contains a small number of unique Canadian sample responses for the verbal subtests that should be read through and familiarized prior to using the WISC-V for the first time. These responses warrant credit if given by examinees in addition to the responses provided in the *WISC-V Admin manual*.

Q: Do I need all three stimulus books?

A: Stimulus Books 1 and 2 are necessary when administering the 10 primary subtests. Stimulus Book 3 is necessary when administering the complementary subtests.

Q: Where do I record process observations and contrast scores on the Record Form? Where are the instructions about how to calculate these scores?

A: The Record Form does not provide designated space to tally or derive process observations or contrast scores because they are not used for every administration or by every practitioner. The Record Form pages associated with each subtest and with summary and analysis were also subject to horizontal and vertical space limitations. These limitations are due to the maximum amount of printed and white space and pages available within a durable, bound paper booklet. There was simply not room to include these optional scores.

Page 50 of the *WISC-V Administration and Scoring Manual* provides the instructions for recording process observations on the Record Form in undesignated space (i.e., the margins of the Record Form). Page 76 of the manual provides instructions on using the tables in Appendix G of the *WISC-V Canadian Manual* to obtain the normative information for selected process observations for certain subtests.

The Record Form also does not provide space to derive contrast scores. However, Appendix F of the *WISC-V Canadian Manual* contains the necessary directions and tables to derive these scores, as well as the corresponding interpretive information.

Q: On the Process Analysis page in the Raw Score to Base Rate Conversion table, the number of errors sometimes occurs with multiple base rates. For example, 1 error for a child aged 9 for BDe corresponds with both < 5 and < 2. What should I do?

A: Use the smaller of the two numbers because of how cumulative percentages are calculated. Refer to p. 75 of the WISC–V Administration and Scoring Manual.

Canadian versus U.S. Norms

Q: Why are the U.S. norms provided in my Canadian WISC–V kit? Are the norms different for Canadians vs Americans on the WISC–V? Which norm set do I use?

A: The U.S. norms are available to CDN customers purchasing the Canadian WISC–V kit because not all Pearson’s assessments have Canadian norms and it is sometime necessary to use U.S. norms in order to maintain a consistent normative set across batteries. For example, when examining an ability achievement discrepancy with the KTEA-3 for identification of a specific learning disability, customers will need to use U.S. norms for WISC–V as CDN norms do not exist for the KTEA-3. Including U.S. norms in the CDN edition of the WISC–V gives CDN practitioners the same flexibility that is afforded to U.S. customers; that is, the same access to other assessment instruments that may be used to compliment a WISC–V administration.

Nevertheless the Canadian norms are the most appropriate reference for Canadian children tested using the WISC–V. When using the WISC–V with Canadian children, practitioners are advised to use the Canadian norms, unless there is significant justification for doing otherwise. Responses to referral questions should be guided by best practice procedures and ethical considerations. Practitioners should make a priori decisions regarding the use of normative information. For any test administered to a Canadian child, scores based on Canadian normative information (e.g., standard scores, percentile ranks, base rates) should be reported, if available. If Canadian normative information is not available for an administered measure, the use of U.S norms should be noted and considered when interpreting scores.

Performance differences between the two countries exist and this is why it is important to report Canadian norms for Canadian examinees whenever reporting a child’s current intellectual functioning. Canadian norms are harder and generally Canadian children obtain higher raw scores than American children on WISC–V subtests. Details on the performance differences between Canada and the U.S are provided in the WISC V CDN Manual, Chapter 6. In general, differences between Canada and U.S. norm sets are small when examining the overall standardization samples – approximately 1 FSIQ point. Differences in FSIQ vary depending on the age of the child and ability level of the child. Nevertheless, the largest difference is no greater than 4 FSIQ points (CDNs with lower standardized scores) for any participant in the standardization sample (including clinical cases). In the WISC V clinical sample, Canadian children previously diagnosed with an intellectual disability (n=23), obtained differences no larger than 2 standard FSIQ points compared to U.S. norms.

Q-global Scoring and Reporting

Q: What is Q-global?

A: Q-global is a web-based scoring and reporting platform that offers accessibility from any computer connected to the Internet. It allows for quick and automatic organization of examinee information and the ability to generate scores and produce accurate and detailed results. Reports are available in a PDF or WORD document format. Go to <http://www.helloq.ca> to sign up for a Q-global account.

Q: When will the WISC–V Score Report and WISC–V interpretive report writer be available?

A: The WISC–V score report is available *now* on Q-global. The interpretive report generally becomes available approximately 6 months following the publication of a test. Please visit HelloQ.ca for information on release dates.

Q: Can I reprint a Score Report from Q-global at no charge?

A: Yes. You can reprint a report at no charge if you change any demographic or report options. However, if you alter raw data, a new record is created and a new report usage is required to print the output.

Q: How do you use subtest substitution and proration for the FSIQ when scoring the WISC–V in Q-global?

A: A drop-down menu within the WISC–V Q-global scoring software facilitates subtest substitution. Choose your substitution in the drop-down menu.

On rare occasions, an inadequate number of valid subtest scores are obtained to derive the FSIQ, despite the availability of secondary subtests. Q-global automatically prorates the FSIQ if a primary subtest that contributes to it is missing and a secondary subtest is not selected for substitution. If more than one primary subtest is missing, the FSIQ is not calculated. Proration is only available for the FSIQ and only when the prorated sum of scaled scores is based on primary subtests. You cannot combine subtest substitution and proration when deriving the FSIQ.

Q: Are the allowable substitutions for primary subtests different on Q-global compared to hand scoring?

A: The rules governing allowable substitutions for core subtests for Q-global and hand scoring (i.e., in the *WISC–V Administration and Scoring Manual*) are the same. Substitution should only be used when the primary subtest is missing or invalid or in certain clinical situations when it is determined that a secondary subtest is a better estimate of the cognitive ability than the primary subtest (e.g., when a child’s physical condition interferes with performance). Any substitution selected within Q-global is made on all applicable composites, and any score comparisons that utilize the substituted subtest are affected.

Q: Why are some score comparisons not available on the Q-global platform if I substitute a secondary subtest for a primary subtest?

A: The score comparisons are not available because the data they are based on require the missing subtest. For example, pairwise index-level difference comparisons that include the VCI are not provided in Q-global if Information is substituted for Vocabulary when deriving the FSIQ, because the VCI is not calculated.

Some other comparisons may also be unavailable if substitution is used. For example, index-level strengths and weaknesses comparisons require calculation of the mean primary index score or the FSIQ. If the VCI is unavailable, the MIS cannot be calculated. In this situation, the FSIQ becomes the comparison score, and the other available primary index scores are compared with the FSIQ rather than the MIS.

Q: Are score comparisons with the WIAT–III available on Q-global?

A: Yes. Starting in February 2015, it will be possible to either manually enter the WISC–V scores when creating a WIAT–III score report or import scores from the WISC–V score report on Q-global.

Q: What is included in the score report with the WIAT–III on Q-global?

A: The report will include two analyses to aid in the identification of specific learning disabilities: the traditional ability-achievement discrepancy analysis and the pattern of strengths and weaknesses discrepancy analysis.

Q: Are score comparisons with the KTEA-3 available on Q-global?

A: No. Score comparisons with the KTEA-3 are not available with the WISC–V Canadian edition as there are no KTEA-3 CDN norms available for such a comparison to be made. However, customers have the ability to choose WISC–V U.S. norms in order to examine ability-achievement discrepancies or patterns of strength and weaknesses discrepancy analyses with the KTEA-3.

Q: To use Q-global, do I need to purchase iPads or other tablets?

A: Q-global is a web-based scoring and reporting system (with some online administration features for rating scales). Q-global can be used with any device you use to access the web; it does not require iPads.

Conversely, administering the WISC–V on Q-interactive does require the purchase of two iPads. Scoring is included in the Q-interactive test administration using the tablets; no additional purchase is necessary.

Q: Can you confirm if your Q-global program is compatible with Mac computers?

A: Yes, you may use Q-global on Macs.

Q: If one purchases Q-interactive vs Q-Global, would the child's data need to be stored in another location or would it still be uploaded?

A: With Q-interactive, you are actually administering the test using the tablet devices. The tablets are serving as your stimulus book and record form for the WISC-V. Data are transferred and stored via best-in-industry standards for security. These precautions help you with PIPEDA compliance.

When you use Q-global to score the WISC–V, you will still have the paper record form that you will need to store appropriately. Scores would be input into the Q-global system and securely saved there. However, Q-global (for the WISC–V) is only saving raw scores/item score information, not responses as in Q-interactive. Think of Q-global for WISC–V as

similar to scoring programs you have used in the past (only this one is web-based with a secure server).

Q: When you purchase Q-global scoring, can you access it from any computer connected to the Internet or only one computer in the office? Also, what are the pricing options for the reports?

A: Yes, since Q-global is web-based, you may access it using your username and password from any device that is connected to the internet. There are two pricing options available. In addition to a per-report price, there is also an unlimited-use 1 yr subscription option. Please visit [PearsonClinical.ca/WISCV](https://www.pearsonclinical.ca/WISCV) for pricing.