**DOES RALPH HAVE A SPECIFIC LEARNING DISABILITY?**

**Ralph's Initial Test Scores – Table 1**

|  |  |  |  |
| --- | --- | --- | --- |
| Test | Stan-dardScore[[1]](#footnote-1) | 95%Confi-dence[[2]](#footnote-2) | Per-cen-tile[[3]](#footnote-3) |
| **Wechsler Intelligence Scale for Children (WISC-V)** |  |  |  |
| Verbal Comprehension Index (VCI) |  95 |  88 – 103 | 37 |
| Visual-Spatial Index (VSI) |  97 |  90 – 105 | 42 |
| Fluid Reasoning Index (FRI) |  97 |  90 – 104  | 42 |
| Working Memory Index (WMI) |  91 |  84 – 99  | 27 |
| Processing Speed Index (PSI) |  92 |  84 – 102 | 30 |
| Full Scale IQ (FSIQ) |  92 |  87 – 98  | 30 |
| **Woodcock-Johnson IV (WJ IV)** |  |  |  |
| Broad Reading Cluster |  70 |  65 – 79  | 02 |
| Broad Mathematics Cluster |  90 |  84 – 98  | 25 |
| Broad Written Language Cluster |  71 |  66 – 80  | 03 |
| Broad Oral Language Cluster |  88 |  82 – 96  | 21 |

**Initial Findings**

1. There is no evidence of a disorder in a basic psychological process involved in understanding or in using language, spoken or written, so Ralph cannot be identified as having a specific learning disability.

2. The discrepancy between Ralph's "ability" (WISC-V FSIQ = 92, percentile rank 30) and lowest "achievement" (WJ IV Broad Reading Custer = 70, percentile rank 2) is only 22 points, so Ralph cannot be identified as having a specific learning disability.

3. Ralph does not have a specific learning disability.

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**Ralph's Additional Test Scores – Table 2**

|  |  |  |  |
| --- | --- | --- | --- |
| **Test** | Stand-dardScore | 95%Confi-dence | Per-cen-tile |
| **Wechsler Intelligence Scale for Children (WISC-V)** |  |  |  |
| Full Scale IQ (FSIQ) |  92 |  87 – 98  | 30 |
| **Woodcock-Johnson IV (WJ IV)** |  |  |  |
| Broad Reading Cluster |  70 |  65 – 79  | 02 |
| Broad Mathematics Cluster |  90 |  84 – 98  | 25 |
| Broad Written Language Cluster |  71 |  66 – 80  | 03 |
| Broad Oral Language Cluster |  88 |  82 – 96  | 21 |
| Phonological Processing (*Ga*) Cluster |  70 |  65 – 79  | 02 |
| Speed of Lexical Access Cluster |  61 |  54 – 68  |  0.5 |

**Revised Findings**

1. There is clear evidence of disorders in two basic psychological processes involved in understanding or in using language, spoken or written: phonological awareness (standard score 70, percentile rank 2) and rapid automatized naming (RAN) (standard score 61, percentile rank 0.5). These processes have been shown by research to be related to achievement in reading and writing. Ralph might be eligible for identification as having a specific learning disability.

2. However, the discrepancy between Ralph's "ability" (WISC-V FSIQ = 92, percentile rank 30) and lowest "achievement" (WJ IV Broad Reading Custer = 70, percentile rank 2) is only 22 points, so Ralph cannot be identified as having a specific learning disability.

3. Ralph does not have a specific learning disability.

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**Ralph's Final Test Scores – Table 3**

|  |  |  |  |
| --- | --- | --- | --- |
| Test | Stand-dardScore | 95%Confi-dence | Per-cen-tile |
| **Wechsler Intelligence Scale for Children (WISC-V)** |  |  |  |
| Full Scale IQ (FSIQ) |  92 |  88 – 96  | 30 |
| **Woodcock-Johnson IV (WJ IV)** |  |  |  |
| Broad Reading Cluster |  70 |  65 – 79  | 02 |
| Broad Mathematics Cluster |  90 |  84 – 98  | 25 |
| Broad Written Language Cluster |  71 |  66 – 80  | 03 |
| Broad Oral Language Cluster |  88 |  82 – 96  | 21 |
| Phonological Processing (*Ga*) Cluster |  70 |  65 – 79  | 02 |
| Speed of Lexical Access Cluster  |  61 |  54 – 68  |  0.5 |
| Reading Rate Cluster |  60 |  53 – 67  |  0.4 |
| Reading Fluency Cluster |  69 |  61 – 77  | 02 |

**Findings Revised Again**

1. There is clear evidence of disorders in two basic psychological processes involved in understanding or in using language, spoken or written: phonological awareness and rapid automatized naming (RAN). These processes have been shown by research to be related to achievement in reading and writing. Ralph might be eligible for identification as having a specific learning disability.

2. The discrepancies between Ralph's "ability" (WISC-V FSIQ = 92, percentile rank 30) and reading rate (standard score 60 [2.67 standard deviations below the mean]) and Reading Fluency (69, percentile rank 2) "achievement" on the WJ IV are, respectively 32 and 23 points (both greater than 22.5 points), so Ralph might be eligible for identification as having a specific learning disability.

3. Ralph clearly has a specific learning disability in reading fluency and is clearly eligible for special education services.

**SCORES USED WITH THE TESTS IN THIS REPORT**

When a new test is developed, it is *normed* on a *sample* of hundreds or thousands of people. The sample should be like that for a good opinion poll: female and male, urban and rural, different parts of the country, different income levels, etc. The scores from that norming sample are used as a yardstick for measuring the performance of people who then take the test. This human yardstick allows for the difficulty levels of different tests. The student is being compared to other students on both difficult and easy tasks. You can see from the illustration below that there are more scores in the middle than at the very high and low ends. Many different scoring systems are used, just as you can measure the same distance as 1 yard, 3, feet, 36 inches, 91.4 centimeters, 0.91 meter, or 1/1760 mile.

**PERCENTILE RANKS (PR)** simply state the percent of persons in the norming sample who scored the same as or lower than the student. A percentile rank of 50 would be Average – as high as or higher than 50% and lower than the other 50% of the norming sample. The middle half of scores falls between percentile ranks of 25 and 75.

**STANDARD SCORES** ("quotients" on some tests) have an average (*mean)* of 100 and a *standard deviation* of 15. A standard score of 100 would also be at the 50th percentile rank. The middle half of these standard scores falls between 90 and 110.

**SCALED SCORES** ("standard scores on some tests) are standard scores with an average (*mean)* of 10 and a *standard deviation* of 3. A scaled score of 10 would also be at the 50th percentile rank. The middle half of these standard scores falls between 8 and 12.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **&& &&** |  |  |  |
|  |  There are  | 200 **&**s. |  | **&&&&&& &&&&&&** |  |  |  |
|  |  Each **&&** | = 1%. |  | **&&&&&& &&&&&&** |  |  |  |
|  |  |  |  **&&**  | **&&&&&& &&&&&&** |  **&&** |  |  |
|  |  |  | **&&&&&&** | **&&&&&& &&&&&&** | **&&&&&&** |  |  |
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|  |  |  |  |  |  |  |  |
| Percent in each | 2.2% | 6.7% | 16.1% | 50% | 16.1% | 6.7% | 2.2% |
| Standard Scores | – 69 | 70 – 79 | 80 – 89 | 90 – 109 | 110 – 119 | 120 – 129 | 130 –  |
| Scaled Scores | 1 2 3 |  4 5  |  6 7 |  8 9 10 11 |  12 13 |  14 15 | 16 17 18 19 |
| Percentile Ranks | – 02 | 03 – 08 | 09 – 24 | 25 – 74 | 75 – 90 | 91 – 97 | 98 –  |
| WISC-VClassification  | Extremely Low | Very Low | LowAverage | Average | HighAverage | Very High | Extremely High |
| Woodcock-Johnson Classif. | VeryLow | Low | LowAverage | Average(90 – 110) | High Average (111 – 120) | Superior(121 – 130) | Very Superior(131 – ) |

Adapted from Willis, J. O. & Dumont, R. P., *Guide to identification of learning disabilities* (1998 New York State ed.) (Acton, MA: Copley Custom Publishing, 1998, p. 27). Available at <http://www.myschoolpsychology.com/testing-information/sample-explanations-of-classification-labels/> .

**Tests Taken by Ralph**

**Wechsler Intelligence Scale for Children, 5th ed., Integrated (WISC-V). David Wechsler, The Psychological Corporation (Pearson), 2014: Ten subtests.**

The WISC-V is an individual test that does not require reading or writing. Verbal Comprehension
(VCI) subtests are oral questions requiring oral answers. Fluid Reasoning (FRI) subtests are nonverbally presented, unfamiliar problems that require logical reasoning. Visual-Spatial (VSI) subtests are visual puzzles. Working Memory (WMI) subtests require remembering data (e.g., repeating dictated digits) or remembering and mentally manipulating data (e.g., repeating dictated digits in reversed order). Processing Speed (PSI) subtests measure speed on fairly simple paper-and-pencil tasks. Each composite includes two subtests. Seven of these subtests are included in the Full Scale IQ (FSIQ). One additional subtest of the same ability can be substituted for one primary subtest in the FSIQ if absolutely necessary. Subtest scores and composite scores are based on the scores of the 2,200 children originally tested in a very carefully designed, nationwide sample, but still must be interpreted very cautiously for any individ­ual, especially one who may have somewhat unusual patterns of strengths and weaknesses. As with any test, influencessuch as anxiety, motivation, fatigue, rapport, and experience may invalidate test scores.

#### **Verbal Comprehension Composite**

*Similarities*: explaining how two different things (e.g., horse and cow) or concepts (e.g., hope and fear) could be alike. Scoring is 2-1-0, according to the quality of the responses. (FS)

*Vocabulary*: giving oral definitions of words. Scoring is 2-1-0, according to the quality of the responses. (FS)

#### **Visual-Spatial Composite**





*Block Design*\*\*: copying small geometric designs with four or nine larger plastic cubes. The most difficult items offer bonus points for speed. (FS)

*Visual Puzzles\**: selecting the three out of six shapes that could fit together to make the complex shape shown above the choices.

**Fluid Reasoning Composite**

*Matrix Reasoning*: completing logical arrangements of designs with missing

parts; multiple-choice. (FS)

*Figure Weights\**: multiple-choice, algebra-like problems using pictures on a balance scale

(e.g., 🕾🕾 = 🖯🖯🖯 ; 🖯 = ✄✄; 🕾 = how many ✄? (FS)

#### **Working Memory Composite**

*Digit Span*: repeating increasingly long dictated series of digits (e.g., 4 1 7 9) forwards, other series backwards, and other series in numericdal order. Series begin with two digits and keep increasing in length, with two trials at each length. (Separate scores are also provided for Digit Span Forward, Digit Span Backward, and Digit Span Sequencing.) (FS)

*Picture Span*: the child sees one or more pictures on a page and then must find the same picture or pictures within a larger group of pictures on the next page. Scoring is 2 points for the correct pictures in the correct sequence and 1 for the correct pictures out of sequence. The sequences increase in length.

**Processing Speed Composite** 1 2 3 4 5 6 7 8 9

*Coding A*\*\*: marking rows of shapes with different lines according to a ⊥ ↑ > ↔ Π ∩ ∅ ∴ ↓

 code as quickly as possible for 2 minutes (under age 8) (FS)

C*oding* *B*\*\*: transcribing a digit-symbol code as quickly as possible for 3 7 4 1 2 9 6 5 2 1 4

two minutes (age 8 and older). (FS)

*Symbol Search*\*\*: deciding if target symbols appear in a

row of symbols and marking *YES* or *NO* accordingly. ⊥ ↑ > ↔ Π ∩ ⊥ ∅ ∴ ↓ YES NO

The **Full Scale IQ** score is derived from the sum of the scaled scores on the seven subtests marked with (FS) above with one substitution of a subtest in the same category permitted if absolutely necessary. The Full Scale IQ summarizes overall performance on the abilities measured by the WISC-V, but its usefulness diminishes as variability increases among the component scores. Also, it obviously does not reflect abilities not measured by the WISC-V.

**Woodcock-Johnson Tests of Cognitive Ability, Academic Achievement, and Oral Language, Fourth Edition (WJ IV COG, ACH, & OL). Fredrick A. Schrank, Kevin S. McGrew & Nancy Mather, Riverside Publishing, 2014. Selected tests.**

 Unlike many individual ability tests, the WJ IV Cognitive Ability tests are explicitly designed to assess a student’s abilities on many specific McGrew, Flanagan, and Ortiz Integrated Cattell-Horn-Carroll (CHC) broad cognitive abilities, not just a total score or a few composite factors. Each of first seven tests in the Standard Battery is designed to measure one broad ability as well as General Intellectual Ability (GIA). The remaining three Standard Battery and ten Extended Battery tests provide a second test for each broad ability and a third test for an extended versions of some clusters and allow computation of Narrow Ability and Other Clinical Clusters. The 20 Tests of Achievement are organized into 6 Reading, 5 Mathematics, 4 writing, and 6 Cross—Domain Clusters. The Tests of Oral Language include 8 English language tests in 9 clusters, 2 clusters with one COG and one OL test each, and 3 Spanish language tests forming 3 clusters. Most auditory tests are presented from a CD through earphones unless this proves impossible. Examiners are permitted to select the tests they need to assess abilities in which they are interested for a particular student. The WJ IV was normed on an extremely large, carefully selected sample including 664 preschoolers, 3,891 students in grades K-12, 775 college and graduate students, and 2,086 other adults drawn from 46 states and the District of Columbia. The same persons also provided norms for the WJ IV Tests of Cognitive Ability, Achievement and Tests of Oral Language, so the cognitive, achievement, and oral language tests can be compared directly, and cognitive and oral language tests can be combined to measure CHC factors. Abbreviations for broad and narrow Cattell-Horn-Carroll (CHC) factors are shown in parentheses below.

**Tests of Cognitive Ability**

*Auditory Processing (Ga)*

5. Phonological Processing includes three subtests. In *Word Access* the examinee selects or

 names words that begin with or end with or contain in the middle a specified sound (e.g.,

"Tell me the word that has the /f/ sound in the middle of the word. /f/." For *Word Fluency* the examinee must say in one minute as many words as possible that begin with a specified

 sound, such as /k/ as in "cat." *Substitution* asks the examinee to change a sound in a word

 (e.g., "Change the /h/ in 'hope' to /k/." [cope]).

 12. Nonword Repetition: the examinee tries to accurately repeat dictated nonsense words, such

 as *flurp* or *pallistrinka*.

**Tests of Oral Language**

*Broad Oral Language*

 1. Picture Vocabulary: saying the names of pictures. This Oral Language test also contributes

 to the WJ IV COG Extended Comprehension-Knowledge Cluster.)

 2. Oral Comprehension: the student says the word missing at the end of each dictated sentence

 or very brief paragraph. (Compare to ACH Passage Comprehension.)

 6. Understanding Directions: the examinee follows oral directions to point to different parts of

 pictures.

*Speed of Lexical Access*

 4. Rapid Picture Naming: the examinee tries to name simple pictures as quickly as possible for

 two minutes. This test measures Rapid Automatized Naming (RAN).

 8. Retrieval Fluency: the student tries to name as many things as possible in one minute in each

 of three specified categories, e.g., fruits.

**Tests of Achievement**

*Broad Reading*

 1. Letter-Word Identification: naming letters and reading words aloud from a list. (Compare to ACH Spelling.)

 4. Passage Comprehension: matching printed words to pictures (for beginning readers) and orally supplying the missing word removed from each sentence or very brief paragraph (e.g., “Woof,” said the \_\_\_\_\_, biting the hand that fed it.”). (Compare to OL Oral Comprehension.)

 9. Sentence Reading Fluency: speed (for three minutes) of silently reading sentences and marking "yes" or "no" for each to indicate its truth.

*Broad Mathematics*

 2. Applied Problems are oral, math “word problems,” some with illustrations or printed

 instructions, solved with paper and pencil.

5. Calculation involves arithmetic computation with paper and pencil.

10. Math Facts Fluency: speed of performing simple calculations for 3 minutes.

*Broad Written Language*

 3. Spelling: writing letters and words from dictation.

 6. Writing Samples: writing sentences according to directions; many items include pictures; spelling does not count on most items. Most examinees write 12 sentences.

11. Sentence Writing Fluency: writing simple sentences, using three given words for each item and describing a picture, as quickly as possible for seven minutes.

*Reading Fluency*

 8. Oral Reading: accuracy of oral reading of passages.

 9. Sentence Reading Fluency: speed (for three minutes) of silently reading sentences and

marking "yes" or "no" for each to indicate its truth.

*Reading Rate*

 9. Sentence Reading Fluency: speed (for three minutes) of silently reading sentences and marking "yes" or "no" for each to indicate its truth.

 15. Word Reading Fluency: number of words read correctly from a printed list in three minutes.

1. These are the standard scores or scaled scores used by the test publishers (please see the first page of this appendix). The percentile ranks in the last columns provide a common measurement that is the same for all of the tests (please see the third page of this appendix). [↑](#footnote-ref-1)
2. Test scores can never be perfectly reliable, even on the very best tests. Lucky and unlucky guesses, barely beating or missing time limits, and other random influences inevitably alter scores. This score interval shows how much scores are likely to vary 95% of the time just by pure chance. [↑](#footnote-ref-2)
3. Percentile ranks tell the percentage of students of the same age or grade whose scores Ralph tied or exceeded. For example, a percentile rank of 37 would mean that Ralph scored as high as or higher than 36 percent of peers and lower than the other 63 percent. [↑](#footnote-ref-3)