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Verbal Domain Case Study

“Aaron has constantly scored low on academic tests
and is not engaged in the classroom...”



Aaron says that he enjoys school but he is noticeably uncomfortable when talking about academic subjects and his own perceptions of his academic skill levels.

He sees most schoolwork as difficult but says he does his best to learn in class and complete homework assignments.

His teacher is concerned with Aaron's poor performance in all academic areas.

Case Study No. 1



Meet Aaron... a 10-year-old, African American boy with an engaging smile and a friendly, easygoing manner. After spending time with Aaron, it is easy to see that he enjoys the company of others and is equally comfortable around children and adults. Aaron likes sports and is a good athlete. Although he is somewhat quiet when playing with peers, it is apparent through observation that Aaron is well liked by both boys and girls in his class.

Aaron likes to play baseball and basketball and plays with friends after school as well as on school and community-sponsored teams. He says that he enjoys school but he is noticeably uncomfortable when talking about academic subjects and his own perceptions of his academic skill levels, especially in reading and writing. Aaron says that he does not really like to read much and does not pursue reading on his own as a source of enjoyment. He sees most schoolwork as difficult but says he does his best to learn in class and complete homework assignments. Mathematics is Aaron's favorite subject. When not playing with friends or doing schoolwork, Aaron spends his time watching TV with his two older brothers and younger sister.

Aaron is in the fifth grade at Washington Elementary and has been receiving educational support services through district remediation programs since the second grade, at which time he earned extremely low scores in reading and language arts on a standardized group achievement test administered in the early spring. The remedial reading program is designed to mesh with the regular classroom whole language instructional program and emphasizes improvement of reading comprehension skills rather than a systematic approach to word decoding skill development.

Aaron's teacher is concerned with Aaron's poor performance in all academic areas. His teacher reports that he does not do well on tests and does not participate in classroom discussions of material being taught. When asked a direct question during classroom instruction, Aaron smiles at her but usually

does not offer a response. Aaron's teacher is wondering if he might have a mental handicap because of his lack of engagement during class lessons and his consistently low performance on standardized group achievement tests and classroom tests.

As part of a complete psychoeducational assessment, Aaron was administered the core and supplemental subtests of the Wechsler Intelligence Scale for Children®-Fourth Edition Integrated (WISC®-IV Integrated). Although Aaron performed poorly on all three of the subtests that compose the [Verbal Comprehension Index](#) and earned a VCI composite score of 75, he was much more effective in his efforts with the [Word Reasoning](#) subtest, a task that required him to listen carefully to a series of clues and identify the common concept described when the clues are put together.

For the three core tasks that make up the [Verbal Comprehension Index](#), Aaron was required to explain in his own words how two objects or concepts are alike, to define the meanings of words, and to explain the general principles or social conventions that guide behavior. He experienced a great deal of difficulty expressing his thoughts in words for these three tasks and often chose to respond simply, "I don't know." On the [Similarities](#) subtest, he was able to provide adequate responses only to the easiest items that involved obvious physical similarities between two objects. Aaron usually responded with a simple "I don't know" for most of the items that

Aaron's efforts earned him the following scores:

WISC®-IV INTEGRATED (WECHSLER INTELLIGENCE SCALE FOR CHILDREN®-FOURTH EDITION INTEGRATED)

	Composite Score	Percentile Rank
SCALE		
Full	76	5
INDEXES		
Verbal Comprehension	75	5
Perceptual Reasoning	90	25
Working Memory	74	4
Processing Speed	85	16
VERBAL COMPREHENSION SUBTESTS		
	Scaled Score	Percentile Rank
Similarities	6	9
Vocabulary	5	5
Comprehension	6	9
Information	7	16
Word Reasoning	10	50
PERCEPTUAL REASONING SUBTESTS		
Block Design	5	5
Picture Concepts	9	37
Matrix Reasoning	11	63
Picture Completion	10	50
WORKING MEMORY SUBTESTS		
Digit Span	6	9
Letter-Number Sequencing	5	5
Arithmetic	13	84
PROCESSING SPEED SUBTESTS		
Coding	5	5
Symbol Search	10	50
Cancellation	9	37

involved more abstract associations.

On the [Comprehension](#) subtests, Aaron provided adequate explanations for the reasons for specific behaviors related to very simple everyday activities but could offer little in the way of explanation of more complex social situations. Aaron was able to provide the meaning of words that represented common objects and a few simple verbs but was unable to effectively define any of the words that related to complex actions or abstract concepts.

While Aaron's performance with the Similarities, Comprehension, and [Vocabulary](#) subtests appeared to reflect a lack of higher level conceptual thinking, his performance on the [Matrix Reasoning](#), [Picture Concepts](#), and [Picture Completion](#) subtests indicated that he was capable of higher level conceptual reasoning. His performance on the Word Reasoning subtest suggested that he might be much more capable of applying his reasoning skills to verbal content than he displayed when responding to the three subtests of the VCI, which used a free recall response format and made heavy demands on expressive language abilities.

In order to further investigate Aaron's ability to reason with verbal information and demonstrate his store of verbal knowledge, he was administered the process-oriented, verbal multiple-choice subtests included in the WISC-IV Integrated. Aaron's performance yielded the following scores:

WISC-IV Integrated (Wechsler Intelligence Scale for Children-Fourth Edition Integrated)

Verbal Domain Subtests	Scaled Score	Percentile Rank
Similarities Multiple Choice	12	75
Comprehension Multiple Choice	15	95
Vocabulary Multiple Choice	10	50
Picture Vocabulary Multiple Choice	10	50
Information Multiple Choice	7	16

Aaron performed much more effectively on the multiple-choice versions of the Similarities, Comprehension, and Vocabulary subtests than he did with the free recall versions. Although he initially demonstrated some difficulties as he attempted to read the multiple-choice options as they were being orally presented by the examiner, he quickly settled into a routine where he did not attempt to read each response option completely. Rather, he carefully listened to each response option as it was read to him, then indicated his response either by pointing to his choice or calling out the letter corresponding to his choice.

One of the most striking things about Aaron's performance with the multiple-choice tasks was the change in his attitude as he engaged in these tasks. Rather than sitting quietly in his seat and looking downward, with frequent long silences punctuated most often with "I don't know" responses, as in the case of the free response format tasks, Aaron sat up tall in his chair and listened in an animated and intent manner to each item as it was read to him. On occasion, he would chuckle as some of the more obvious incorrect response options were being read and his engaging smile emerged much more frequently throughout these administrations. It seemed that Aaron viewed and approached these tasks as enjoyable games rather than as difficult work.

It is noteworthy that Aaron's greatest improvements in performance were realized on the [Similarities Multiple Choice](#) (scaled score 12) and [Comprehension Multiple Choice](#) (scaled score 15) subtests, the two subtests that were most likely to require the ability to reason with abstract verbal concepts. For the Similarities subtest (scaled score 6), Aaron only attempted responses to 12 items, providing six correct (five 2-point and one 1-point) responses for items that required comparisons of common objects.

When presented with the Similarities Multiple Choice subtest, for which response options were visually displayed and also read to him for each item, Aaron was able to respond to all 21 of the test items he was administered, and provided correct responses for 18 of the 21 items. For most items, Aaron was able to accurately

discriminate between 1- and 2-point options and selected the more complete 2-point response for 13 of his 18 correct responses. The Similarities Multiple Choice subtest format seemed to provide Aaron with a context for correct responding that he lacked in his attempts to express his ideas in his own words when responding to the free recall format items of the Similarities subtest.

As with the Similarities Multiple Choice subtest, the [Comprehension Multiple Choice](#) subtest provided Aaron with a well-defined context in which he was able to effectively apply his reasoning skills. Aaron only attempted 14 items when required to express his responses in the free recall format of the Comprehension

Multiple Choice and Comprehension Multiple Choice subtests indicated that his ability to reason with verbal information and discriminate between plausible, accurate and implausible, inaccurate explanations when response options are provided extends from the higher end of the average range into the superior range when compared to his peers.

For the Vocabulary subtest (scaled score 5), Aaron correctly responded to 10 of the 15 items administered in the free recall format, effectively describing seven concrete nouns and two concrete verbs and one abstract concept verb. Only five of Aaron's 10 correct responses were specific enough to earn 2 points. As with the Similarities and Comprehension subtests,

format, Aaron was able to select the picture that accurately depicted the meaning of a word for all 11 words he correctly described in the free recall format and also correctly identified the visual representation of an additional nine words.

Aaron's performance with the Vocabulary Multiple Choice and Picture Vocabulary Multiple Choice subtests indicated that his familiarity with the meaning of words is at least in the average range when compared to his peers.

In contrast to the gains Aaron realized on the Similarities Multiple Choice, Comprehension Multiple Choice, Vocabulary Multiple Choice, and Picture Vocabulary Multiple Choice subtests over the free response counterparts of these



Aaron's below-grade reading skills impede his ability to learn new information provided in grade-level textbooks...

subtest (scaled score 6), providing eight correct responses (five 2-point and three 1-point) to questions related to specific functional daily activities, while struggling unsuccessfully in his attempts to articulate reasons for more abstract social conventions and principles.

When presented with the Comprehension Multiple Choice subtest, for which response options were visually displayed and read to him for each item, Aaron was able to listen carefully, and effectively discriminate between implausible or unlikely response options and plausible and accurate response options for 19 of the 21 test items, including identifying 2-point responses for five of the eight most difficult items on the test. In the context of the multiple-choice format, Aaron was able to improve two of his 1-point free response answers to 2-point multiple-choice responses, and responded correctly to an additional 11 items, selecting the 2-point response for nine of these items and the 1-point response for two of them.

Aaron's performance with the Similarities

Aaron found it difficult to articulate his thoughts about the meanings of words that represented concepts that are more abstract.

Aaron was able to demonstrate much greater knowledge of word meanings through the use of the [Vocabulary Multiple Choice](#) (scaled score 10) and [Picture Vocabulary Multiple Choice](#) subtest (scaled score 10) formats. While his performance on these alternate format vocabulary tasks reflected large, significant gains over his Vocabulary subtest score, his level of performance on these tasks did not reach the levels attained on the Similarities and Comprehension Multiple Choice subtests.

When presented with the Vocabulary Multiple Choice subtest, for which response options for each word were visually displayed and read to him, Aaron was able to correctly identify the 2-point response for all 10 of the words he correctly described in the free recall format, and also identified the correct responses (six 2-point and five 1-point) for an additional 11 words. With the Picture Vocabulary Multiple Choice

same subtests, Aaron earned a low score on the [Information Multiple Choice](#) subtest (scaled score 7) that was comparable to his low score on the Information subtest (scaled score 7).

On the Information subtest, Aaron was able to respond correctly to only the first 13 items that assessed free recall for very basic common knowledge that children are typically exposed to both in the home and at school. Aaron could not provide accurate responses to any of the more difficult questions that represented knowledge that children are typically exposed to through classroom instruction, educational television or radio programs, libraries and bookstores, museums, and independent reading activities.

When presented with the Information Multiple Choice subtest, for which response options were visually displayed and read to him, Aaron was able to select the correct fact for all 13 of the items he correctly answered in free recall format and also identified the correct responses for the next three items of the subtests. Because a

multiple-choice response increase of three correct responses was typical of the performance of children in the WISC-IV standardization sample who were the same age as Aaron, his Information Multiple Choice scaled score did not reflect improvement over his Information scaled score but rather remained comparable to it.

Aaron was administered four different measures of reading skills from the WIAT®-III (Wechsler Individual Achievement Test®-Third Edition). His performance was significantly below average on three of the four measures. Specifically, his weakest reading skill is in reading whole words aloud with automaticity. When provided a list of words (Word Reading), he struggled to recognize high-frequency words and to decode unfamiliar words. Both his word reading accuracy and speed fall below the 1% percentile ranking when compared to peers.

His ability to apply his phonetic skills to read decodable nonsense words on the [Pseudoword Decoding](#) subtest was equally deficit. Typically, he sounded out the initial letter or blend, then guessed. Aaron's performance on the [Spelling](#) subtest reveals similar difficulty in encoding phonetic information and some of his written attempts are unrecognizable. Generally, his word reading and spelling are at about a first-grade level.

Aaron also was shown a fifth-grade-level passage that he was asked to read aloud (Oral Reading Fluency). When he was unable to read the text within the time limit, he was provided a third-grade passage, and his standard score of 70 is based on oral reading of the below-grade-level passages. Several errors were noted in addition to his slow reading rate. He employed a familiar strategy of looking at the initial letter then guessing rather than decoding unfamiliar words; however, he was able to use context clues so that his guesses often made sense. His rare attempts at decoding were laborious and he showed lack of mastery, particularly of vowel sounds. He started and restarted sentences and had little prosody as he read without fluency.

On the [Reading Comprehension](#) subtest, Aaron was asked to silently read a passage, then to orally answer several questions based on what he had read. Similar to his performance on [Oral Reading Fluency](#), he was not able to read fifth-grade-level passages independently with adequate comprehension. As a result, his

standard score of 87 is based on answering questions relevant to his reading of third-grade-level passages. Aaron tended to earn points for items related to stated facts or details from the passage but he missed many of the inferential items for which he had to "read between the lines" to garner information. Given the improvement in his WISC-IV scores when subtest requirements for expressive language were replaced with multiple-choice responses, it is also likely that his reading comprehension score is depressed somewhat by his deficits in expressive language.

At the same time, his average score on the [Listening Comprehension](#) subtest provides evidence that his reading comprehension deficits are unlikely to be the result of poor word knowledge or concept formation. In general, Aaron's below-grade-level reading skills impede his ability to learn new information provided in grade-level textbooks or similar instructional materials. As a result, he is more dependent on verbal instruction, which is sometimes problematic because of his poor verbal working memory abilities, or visual instruction such as hands-on demonstration. Further, it is difficult for him to exhibit acquired knowledge if evaluation is highly dependent on his reading ability.

Nonetheless, Aaron is able to use his good reasoning abilities, paired with context clues, to understand some text even when he cannot read it word for word. Although it is important for his

teachers to hear him read on occasion to evaluate reading progress, Aaron is embarrassed when asked to read aloud in front of his classmates and he looks for ways to avoid the task. Because of the anxiety associated with oral reading, his comprehension may actually improve when he is able to read silently.

In summary, Aaron's low reading scores are consistent with his lower VCI and WMI scores on the WISC-IV, he demonstrates difficulties across the spectrum of reading skills, and his performance is typical of students with specific reading disorders. Further, he is unable to pair the phonetic and orthographic features of words so that his decoding problems also affect his spelling (encoding). It is likely the whole language remediation approach has been marginally successful because it has not addressed his need for code-based instruction.

Aaron's academic strengths are in the area of math as observed in his average to above average scores on WIAT-III [Math Problem Solving](#), [Numerical Operations](#), and the three [Math Fluency](#) subtests as well as his above average performance on the WISC-IV [Arithmetic](#) subtest. When word problems were read to him, he was able to overcome his reading-specific difficulties and call upon his strong reasoning abilities for solution. He was able to demonstrate his knowledge of basic math facts with automaticity.

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His lowest math score on **Numerical Operations**, although well within the average range, identified a difficulty solving problems using fractions. There was also a noticeable change in his attention, level of engagement, and effort when tasks tapped into an area in which he felt competent and confident.

Unfortunately, as Aaron approaches middle school with greater demands placed on reading a textbook to learn new math skills, his poor reading may affect his performance. It will be important for his teachers to address his literacy limitations when providing math instruction and when assessing math competencies.

When data are considered in terms of evidence for a Specific Learning

evaluation were consistent with the psychoeducational assessment and documented severe expressive language disorder.

The results from the evaluation were shared with Aaron, his parents, and school staff. Services were recommended for addressing his language and literacy difficulties, including providing speech/language services to improve his significant expressive language delays; providing remedial reading instruction specifically designed to address his severe word recognition deficits; providing books on tape to help Aaron use his effective listening skills to keep up with course content; and providing testing accommodations that would allow Aaron to have test items read to him.

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Disability, three analyses are especially helpful. First of all, Aaron's achievement scores are highly variable with statistically significant and rare differences between each of the reading composite scores (Total Reading, Basic Reading, and Reading Comprehension and Fluency) and the math composite scores (Mathematics and Math Fluency). There is also a statistically significant and unusual difference between his Mathematics and Math Fluency composites but it should be noted that each of these math scores falls within the average to above average range, making the finding less meaningful in terms of SLD.

Secondly, there are statistically significant and rare differences between the Predicted WIAT III scores (based on his WISC-IV performance) and the Actual WIAT III scores for *Word Reading*, *Pseudoword Decoding*, *Oral Reading Fluency*, *Oral Reading Accuracy*, *Oral Reading Rate*, and *Spelling*.

Further, after conducting a Pattern of Strengths and Weaknesses Analysis, there are significant differences in support of an SLD hypothesis when comparing scores representing Aaron's processing strength (WISC-IV PRI score of 90) to his achievement weakness (WIAT-III Basic Reading score of 63), and when comparing his processing strength (WISC-IV PRI score of 90) to his processing weaknesses (WISC-IV VCI score of 75).

Finally, Aaron's scores from the standardized tests are consistent with his classroom performance. As a result of the findings of the comprehensive psychoeducational assessment, Aaron was referred to the speech-language pathologist for further assessment of his language abilities. Results of that



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