

Integrating the WJ IV Tests into A Comprehensive Dyslexia Evaluation

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Dyslexia is most often defined as a neurologically-based specific learning disability (SLD) that is characterized by difficulties with accurate and/or fluent word recognition, poor reading decoding, and poor spelling abilities (Proctor, Mather, & Stephens, 2015). A comprehensive evaluation of dyslexia is multi-faceted and requires multiple sources of data be collected and considered as part of the assessment process. A balanced integration of informal and formal data sources is pertinent in order to fully understand and explain the student's struggles with reading. In turn, the purpose of this article is threefold: 1) stress the multiple data sources that should be collected as part of the dyslexia evaluation, 2) highlight the WJ IV tests that can be administered as part of a comprehensive dyslexia evaluation, and 3) introduce resources available when using the WJ IV tests, to assist evaluators when evaluating for dyslexia.

Multiple Sources of Data as an Integral Part of a Dyslexia Evaluation

According to the *Texas Dyslexia Handbook* (2018), when assessing for dyslexia, the evalu-

ation team must gather and consider information about the student's instructional history in the essential areas of reading (e.g., phonological awareness, phonetic coding, vocabulary, language structure, reading fluency, and reading comprehension). Further, cumulative data must be collected and considered to provide information about factors that may be contributing to, or primary to the student's struggles with reading and spelling. *Table 1* provides a sample list of data that should be considered as part of the dyslexia evaluation.

All data provide pertinent information about the student's academic history and provide a foundation on which the evaluation should be constructed (Stephens-Pisecco, Schultz, Moon, & Holman, 2019).

Additional information regarding the student's performance in relation to same-age or grade peers is obtained through the use of norm-referenced, standardized tests. The results of formal assessment data are integrated with the other sources of data and used to further validate areas of strengths and weaknesses. One such battery of tests that provides a comprehensive selection of tests

useful when evaluating dyslexia is the *WJ IV Tests of Achievement* (WJ IV ACH; Schrank, Mather, & McGrew, 2014), *WJ IV Tests of Cognitive Abilities* (WJ IV COG; Schrank, McGrew, & Mather, 2014), and the *WJ IV Tests of Oral Language* (WJ IV OL; Schrank, Mather, & McGrew, 2014).

Using the WJ IV Tests Within A Dyslexia Evaluation

An evaluation for dyslexia typically begins with an assessment of basic reading skills, reading rate, and spelling. Limitations in these areas of achievement are often described as the **primary characteristics of dyslexia**. *Table 2* highlights and describes the many *WJ IV Tests of Achievement* (WJ IV ACH; Schrank, Mather, & McGrew, 2014) that can be used alongside other informal assessment information to assess the primary characteristics of dyslexia.

Dyslexia is also characterized by limitations in secondary achievement areas such as reading comprehension and written expression; these are often described as secondary characteristics of dyslexia. The *WJ IV Tests of*

Table 1. Multiple Sources of Data Collection

Data Source	Description
Family History	Student background information Parent information about the student and the parents' learning experiences Student's emotional and social status Economic status Language acquisition information
School History	Grades, work samples, informal assessment results, information about current classroom performance Attendance rates, tardiness
Response-to-Intervention	Scores obtained on screeners, benchmarks, progress monitoring charts, student's performance in relation to same grade peers. Types of interventions implemented
Teacher Reports	Information regarding student's performance in the classroom (academically and behaviorally) Accommodations & modifications provided

Table 2. WJ IV Achievement Tests that Assess the Primary Characteristics of Dyslexia

WJ IV Tests	What the Test Measures
ACH Test 1: Letter-Word Identification	Recognition and naming of letters and words
ACH Test 3: Spelling	Production (spelling) of words
ACH Test 7: Word Attack	Application of phonics to word reading
ACH Test 8: Oral Reading	Reading sentences aloud accurately and easily
ACH Test 9: Sentence Reading Fluency	Reading and comprehending sentences silently
ACH Test 15: Word Reading Fluency	Reading and comprehending words silently
ACH Test 16: Spelling of Sounds	Application of phonics to spelling

Table 3. WJ IV Achievement Tests that Assess the Secondary Characteristics of Dyslexia

WJ Tests	What the Test Measures
ACH Test 4: Passage Comprehension	Understanding of passages read silently
ACH: Test 6: Writing Samples	Ability to convey meaning in writing
ACH Test 11: Sentence Writing Fluency	Ability to construct short sentences quickly
ACH Test 12: Reading Recall	Understanding of short stories read silently
ACH Test 17: Reading Vocabulary	Understanding of words read silently

Achievement (WJ IV ACH; Schrank, Mather, & McGrew, 2014) battery also includes several tests that measure **secondary characteristics of dyslexia**. Table 3 provides a list of achievement tests and descriptors that can be used to

measure secondary characteristics of dyslexia. In addition to providing numerous test options for assessing primary and secondary characteristics of dyslexia, the WJ IV also provides several other tests that can be

integrated into a comprehensive evaluation for dyslexia. Selected additional tests from the *WJ IV Tests of Cognitive Abilities* (WJ IV COG; Schrank, McGrew, & Mather, 2014) and the *WJ IV Tests of Oral Language* (WJ IV OL; Schrank, Mather, & McGrew, 2014), also provide valuable diagnostic information relevant to the identification of dyslexia. For example, the reading and spelling difficulties of students with dyslexia typically stem from weaknesses in **related cognitive and linguistic abilities** such as phonological awareness, orthographic awareness, memory, rapid naming, and processing and perceptual speed. Table 4 provides a list of WJ IV tests of cognition and oral language abilities relevant to a comprehensive evaluation of dyslexia. In most cases, it is not necessary to administer all the tests listed in Table 4, instead, selective testing should be conducted by the evaluator in areas where additional information is needed to comprehensively answer the referral question (Stephens-Pisecco, Schultz, Moon, & Holman, 2019).

Ability to Learn Independent of Reading

A defining characteristic of dyslexia is that the primary and secondary characteristics of the disability and the related cognitive ability

Table 4. WJ IV Tests that Assess Cognitive and Linguistic Abilities

WJ IV Cognitive & Oral Language Tests	What the Test Measures
COG Test 3: Verbal Attention	Temporary store of verbal information and cuedependent search functions in primary memory
COG Test 4: Letter-Pattern Matching	Orthographic visual perceptual discrimination ability under timed conditions
COG Test 5: Phonological Processing	Word activation, fluency of word access, and word restructuring via phonological codes
COG Test 10: Numbers Reversed	Temporary storage and recoding of numeric information in primary memory
COG Test 11: Number-Pattern Matching	Numeric visual perceptual discrimination ability under timed conditions
COG Test 12: Nonword Repetition	Phonological short-term working memory, sensitivity, and capacity
COG Test 16: Object-Number Sequencing	Assembly of new cognitive structures out of information maintained in working memory
COG Test 17: Pair Cancellation	Symbolic visual perceptual discrimination ability requiring cognitive control under timed conditions
COG Test 18: Memory for Words	Storage capacity for unrelated words in primary memory
OL Test 3: Segmentation	Ability to break apart word, progressing from compound words, to syllables, to individual phonemes
OL Test 4: Rapid Picture Naming	Fluency of recognition, retrieval, and oral production of names of common pictured objects
OL Test 5: Sentence Repetition	Auditory memory span for connected discourse
OL Test 7: Sound Blending	Ability to blend sounds into words
OL Test 8: Retrieval Fluency	Fluency of word access
OL Test 9: Sound Awareness	Ability to analyze and manipulate phonemes through rhyming and deletion tasks

Table 5. WJ IV Constructs to Assess a Student’s Ability to Learn Independent of Reading

WJ IV Constructs	Description
General Intellectual Ability (GIA)	General Intelligence
GfGc Composite	Reasoning & Knowledge
<ul style="list-style-type: none"> • Oral Language • Oral Expression 	Understanding Oral and Receptive Language Expressive single-word vocabulary and ability to listen to and then repeat simple to complex sentences.
<ul style="list-style-type: none"> • Listening Comprehension 	Use of syntactic and semantic cues when listening, and ability to follow simple to complex oral directions.
<ul style="list-style-type: none"> • Vocabulary 	Expressive single-word vocabulary and knowledge of word meanings, synonyms, and antonyms.
Math	Computation skills & problem solving
<ul style="list-style-type: none"> • Calculation • Problem Solving 	Ability to compute math problems Problem solving and logical reasoning with numbers
Knowledge	General Understanding
<ul style="list-style-type: none"> • Academic Knowledge 	Knowledge of science, social studies, and humanities
<ul style="list-style-type: none"> • General Information 	Knowledge of one’s environment & the world

weaknesses are unexpected in relation to other cognitive, linguistic, and achievement abilities, or the student’s ability to learn independent of reading. These developmental differences can often be observed by comparing a student’s cognitive, linguistic, and academic strengths to his or her reading and spelling development.

When using the WJ IV battery of tests, the evaluator has several options when considering a student’s ability to learn independent of reading. *Table 5* provides several optional constructs the WJ IV Battery of Tests provide that can be used as comparisons with reading and spelling ability (Proctor, Mather, & Stephens, 2015). Evaluators should compare the student’s performance on one or more of these to determine whether the student’s performance is higher than performance on reading and spelling measures. If the student scores higher on the selected construct, when compared to reading and spelling skills, the information can serve as an indication that when reading is not required, the student is able to learn.

Integration of Data Sources

The data obtained through the administration of select WJ IV tests should be integrated and analyzed alongside the other multiple

sources of data collected. Specifically, evaluators should look beyond standard scores when interpreting the data and consider all the rich information obtained during the assessment process. For example, the student’s performance on each test provides the evaluator the opportunity to conduct error analysis that might be related to orthographic and/or phonological processing difficulties (e.g., guessed as word based on the initial letter, and/or tended to decode unfamiliar words letter-by-letter) (Proctor, Mather, & Stephens, 2015). Further, observations conducted during testing provide important information regarding the student’s attention, problem-solving skills, and level of engagement and frustration.

The WJ IV Online Scoring and Reporting System provides numerous options or lenses when looking at the data obtained from each test administered. In addition to a wide range of scores, the scoring system provides several variation and comparison procedures that are useful for documenting the relative strengths and weaknesses of individual’s with dyslexia. Other WJ IV scoring options include: Relative Proficiency Index (RPI), Percentile Rank, Cognitive Academic Language Proficiency (CALP), Instructional or Developmental Zones, and Scholastic Aptitude Cluster Scores (See WJ IV

Examiner’s Manual for in-depth descriptions of each score). Further, rich qualitative information can be obtained through observations during testing and analysis of student responses.

A very useful way to interpret the student’s performance beyond the standard score is through the use of the RPI. The RPI is a unique score obtained through the WJ IV and should be utilized to better understand the student’s proficiency level on a given task. For example: If Katarina obtained an RPI of 92/90 on Letter-Word Identification, the score would indicate when same age/grade peers scored at 90% proficiency on the task associated with Letter-Word Identification (*Task demands: Recognizing and naming printed letters and words*), Katarina would perform at 92% proficiency. This score indicates that Katarina’s proficiency when asked to recognize and name printed letters and words is very advanced. Instructional implications of the RPI indicate that Katarina would find similar tasks extremely easy. Conversely, if Claire obtained an RPI of 46/90 (limited proficiency) on Letter-Word Identification, one would expect Claire to find the tasks requiring the recognition and naming of printed letters and words to be very difficult. Such information is extremely important when developing Claire’s instructional program.

WJ IV Dyslexia Resources

There are two resources available via the WJ IV Online Scoring and Reporting System: The WJ IV Assessment Services Bulletin and the WJ IV Dyslexia Report. A description of each follow.

The WJ IV Assessment Bulletin Number 6, *Use of the Woodcock-Johnson IV for the Assessment of Dyslexia* (Proctor, Mather, & Stephens, 2015) provides further explanation of how to use the WJ IV within dyslexia evaluations. This bulletin also provides a profile that may be used to organize various scores that are relevant to this type of evaluation. Interested evaluators may obtain this bulletin from the *Resources* tab of the WJ IV Online Scoring and Reporting System or by emailing Dr. Tammy Stephens directly at Tammy.Stephens@RiversideInsights.com.

A comprehensive dyslexia report is now available via the *WJ IV Interpretation and Instructional Interventions Program* (WIIP; Wendling & Schrank, 2015). The WIIP is an add-on feature of the WJ IV Online Scoring and Reporting System (additional cost is associated with this feature). The WJ IV Dyslexia report’s design was based on the dyslexia tool highlighted in the WJ IV Assessment Bulletin Number 6, *Use of the Woodcock-Johnson IV for*

the Assessment of Dyslexia (Proctor, Mather, & Stephens, 2015). The WJ IV Dyslexia Report provides an organizational framework for assessing the characteristics of dyslexia through the use of select WJ IV tests. The report includes a dyslexia score profile and interpretive overviews with comparisons. The tool is designed to be used in conjunction with multiple sources of data and the examiner's professional judgment when determining dyslexia. Test scores alone should never be used as the sole criterion of dyslexia. When using the WJ IV Dyslexia Report, examiners can include interventions and information from the new Dyslexia Teacher and Parent Checklists, as well as the WIIP checklists.

Conclusions

Dyslexia is a complex neurologically-based SLD that requires a comprehensive evaluation

of reading and spelling abilities. The integration of multiple sources of data along with norm-referenced standardized test scores has been traditionally used to determine whether dyslexia exists. The WJ IV Tests of Achievement, Oral Language, and Cognitive Abilities provide a comprehensive solution of dyslexia testing options. Additionally, the WJ IV Online Scoring and Reporting System provides evaluators with resources that can be used to assist in the organization of a dyslexia evaluation.

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