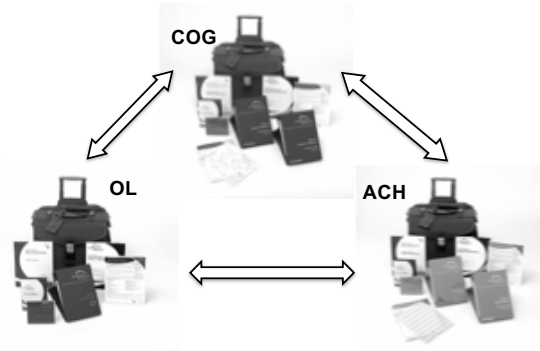


Use of the WJ IV for the Identification of Dyslexia

February 24, 2018
Nancy Mather, Ph.D.
SWIDA
Albuquerque, NM



Disclosure: Co-author of WJ IV

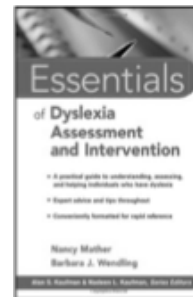


Assessment Service Bulletin # 6



Can obtain at: http://bit.ly/WJIVASB_6

Disclosure: Co-author of *Essentials of Dyslexia: Assessment and Intervention*



Disclosure: Co-author

www.mindplay.com

Three-hour course for
professionals and parents
(Mather & Wendling):

- Provides an overview of dyslexia
- Explains how dyslexia is assessed
- Describes effective types of interventions and accommodations



Agenda: The WJ IV Dyslexia Profile

- Definition of Dyslexia
- The Dyslexia Profile
 - Identifying the Primary Reading and Spelling Difficulties
 - Identifying the Secondary Reading and Writing Difficulties
 - Identifying the Cognitive Correlates
 - Using the Comparison and Variation Procedures
 - Case Study

Charlie, 3rd Grade

- **Strengths in:**
 - Mathematics
 - Oral vocabulary
 - Academic knowledge



- **Weaknesses in:**
 - Word identification
 - Word perception speed
 - Spelling

International Dyslexia Association (2003) defines dyslexia as:

[A] specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede growth of vocabulary and background knowledge.

British Dyslexia Association

The word 'dyslexia' comes from the Greek and means 'difficulty with words'.
Definition: Dyslexia is a specific learning difficulty which mainly affects the development of literacy and language related skills. It is likely to be present at birth and to be lifelong in its effects. It is characterised by difficulties with phonological processing, rapid naming, working memory, processing speed, and the automatic development of skills that may not match up to an individual's other cognitive abilities.

The phonological deficit view that has dominated the field for years is inadequate for explaining all cases of reading disorder (Peterson & Pennington, 2012; Snowling & Hulme, 2012 and its importance has been overstated (Swanson, Trainin, Necochea, & Hammill, 2003).

Peterson, R. L., & Pennington, B. F. (2012). Developmental dyslexia. *The Lancet*, 379(9830), 1997–2007.
Snowling, M. J., & Hulme, C. (2012). Annual research review: The nature and classification of reading disorders—a commentary for proposals on DSM-5. *Journal of Child Psychology and Psychiatry*, 53, 593–607.
Swanson, H. L., Trainin, G., Necochea, D. M., & Hammill, D. D. (2003). Rapid naming, phonological awareness, and reading. A meta analysis of the correlational evidence. *Review of Educational Research*, 73, 407–444.

TABLE 5.2. Patterns of Test Results That Support Different Diagnoses

	RD	LI	SSD	ADHD	ID	ASD
Crystallized intelligence	+	-	+	+	-	-
Fluid intelligence	+	+/-	+	+	-	-
Processing Speed	-	-	+	-	-	-
Reading						
Word recognition	-	-	+	+	+/-	+/-
Phonological coding	-	-	+	+	+/-	+/-
Fluency	-	-	+	+	+/-	+/-
Comprehension	+/-	-	+	+/-	-	-
Oral language						
Semantics	+	-	+	+	-	-
Syntax	+	-	+	+	-	-
Phonological awareness	-	-	-	+	+/-	+/-
Verbal working memory	-	-	-	+/-	-	+
Executive functions						
Inhibition	+	+/-	+	-	-	+
Generating	+	+/-	+	-	-	-
Set shifting	+	+/-	+	+/-	-	-
Sustained attention	+	+/-	+	-	-	-
Visual-spatial skills	+	+	+	+	-	+
Social and communication skills	+	+/-	+	+/-	-	-

Note. +, intact; -, impaired.

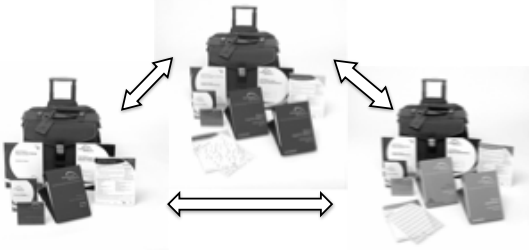
Pennington, B. F. (2009). *Diagnosing learning disorders: A neuropsychological framework* (2nd ed.). New York, NY: Guilford Press.

Consensus on the Definition

- Neurobiological disorder that affects the development of basic reading skills, spelling, and automaticity with sound-symbol connections.
- It is often accompanied by specific weaknesses in cognitive factors that predict poor reading and spelling.
- It is a lifelong condition but effective interventions reduce the impact.
- Many other abilities are often intact and can even be advanced.

The Dyslexia Profile for Use with the WJ IV

Created by: Drs. C. Proctor, N. Mather, T. Stephens-Pisecco, and L. E. Jaffe (2016).



Benefits of the Profile

- Provides a way to organize data regarding consideration of whether or not a person has dyslexia.
- May be used with WJ IV COG, WJ IV ACH and WJ OL, or all three batteries.
- Saves time for the examiner.
- Helps focus the evaluation to the main results that are most relevant to a diagnosis of dyslexia.

- Highlights the cognitive, linguistic, and achievement abilities that are most relevant to dyslexia.
- Provides a format for exploring both discrepancies and comparisons.
- Highlights an individual's strengths and weaknesses.

Identifying the Primary Reading and Spelling Difficulties

Development and Acquisition of:

- **Sound-letter (phoneme-grapheme) associations**
- **Basic reading skills**
 - Phonics and sight word reading
- **Rate (automaticity) of reading and spelling**
- **Spelling**

Identifying the Primary Reading and Spelling Difficulties

WJ IV ACH Reading/Spelling Clusters and Tests

- **Phoneme-Grapheme Knowledge**
 - Word Attack, Spelling of Sounds
 - Measures phonic skills
- **Basic Reading Skills**
 - Letter-Word Identification, Word Attack
- **Reading Rate**
 - Sentence Reading Fluency, Word Reading Fluency
 - Silent reading rate
- **Two spelling tests**
 - Spelling, Spelling of Sounds



Identifying the Primary Reading and Spelling Difficulties

WJ IV ACH Test 8: Oral Reading



- **Contributes to the Reading Fluency cluster.**
- **Individual reads increasingly difficult sentences aloud.**
- **Similar to an informal reading inventory.**
- **Good first test to administer in a reading evaluation.**

Name: W., Westin
Date of Birth: 03/06/2007
Age: 9 years, 11 months
Sex: Male
Date of Testing: 02/11/2017

School:
Teacher:
Grade: 3.5
ID:
Examiners:

TESTS ADMINISTERED
Woodcock-Johnson IV Tests of Achievement Form A and Extended (Norms based on age 9-11)

TABLE OF SCORES
Woodcock-Johnson IV Tests of Achievement Form A and Extended (Norms based on age 9-11)

CLUSTER/TEST	SE	RP	Proficiency	SS (88% Band)	PR (88% Band)
BASIC READING SKILLS	2.3	30/90	Limited	82 (80-85)	12 (9-16)
READING FLUENCY	2.1	13/90	Very Limited	78 (74-82)	7 (4-12)
Letter-Word Identification	2.2	16/90	Very Limited	80 (77-82)	9 (6-12)
Spelling	2.3	27/90	Limited	80 (76-83)	9 (6-13)
Word Attack	2.5	67/90	Limited	88 (83-92)	21 (13-30)
Oral Reading	1.9	45/90	Limited	82 (79-85)	12 (8-16)
Sentence Reading Fluency	2.2	3/90	Extremely Limited	79 (74-85)	6 (4-15)

Name: Fernandez, Isabel
Date of Birth: 09/29/2003
Age: 13 years, 4 months
Sex: Female
Date of Testing: 02/13/2017

School:
Teacher:
Grade: 7.5
ID:
Examiners:

TESTS ADMINISTERED
Woodcock-Johnson IV Tests of Achievement Form A and Extended (Norms based on age 13-4)

TABLE OF SCORES
Woodcock-Johnson IV Tests of Achievement Form A and Extended (Norms based on age 13-4)

CLUSTER/TEST	SE	RP	Proficiency	SS (88% Band)	PR (88% Band)
BASIC READING SKILLS	1.8	3/90	Extremely Limited	55 (52-59)	<1 (<1-1)
Letter-Word Identification	1.9	1/90	Extremely Limited	54 (51-58)	<1 (<1-1)
Word Attack	1.4	11/90	Very Limited	62 (56-67)	<1 (<1-1)
READING FLUENCY	2.2	1/90	Extremely Limited	60 (55-65)	<1 (<1-1)
Oral Reading	2.2	19/90	Very Limited	70 (67-74)	2 (1-4)
Sentence Reading Fluency	2.2	0/90	Extremely Limited	61 (55-67)	<1 (<1-1)
WRITTEN LANGUAGE	2.5	12/90	Very Limited	64 (61-67)	<1 (<1-2)
Spelling	2.1	2/90	Extremely Limited	59 (55-63)	<1 (<1-1)
Writing Samples	3.3	49/90	Limited	80 (76-85)	9 (5-16)

Identifying the Secondary Reading and Writing Difficulties

- Reading Comprehension
- Written Expression
- Vocabulary and Knowledge

Reading Comprehension

“Individuals with problems in reading comprehension that are not attributable to poor word recognition have comprehension problems that are general to language comprehension rather than specific to reading” (p. 3).

Source: Spencer, M., Quinn, J. M., Wagner, R. K. (2014). Specific reading comprehension disability: Major problem, myth, or misnomer? *Learning Disabilities Research & Practice*, 29, 3-9.

Cognitive Correlates

- Are related cognitive and linguistic factors that affect the development of reading and spelling skill.
- They predict difficulties with reading and spelling development.
- Some are more trainable than others (e.g., phonological awareness vs. working memory).

Cognitive and Linguistic Correlates of Dyslexia

- Attention
- Phonological Processing
- Orthographic Processing
- Memory
- Rapid Automatized Naming (RAN)
- Processing Speed

Phonological Processing

Oral Language Ability

The ability to hear and manipulate the speech sounds in words.

Phonological Processing

WJ IV COG Test 5: Phonological Processing



Measures three different aspects of speech sound processing:

- Word Access
 - “Tell me a word that starts with the /ch/ sound.”
- Word Fluency
 - Timed for 1 minute; words that begin with a sound.
- Substitution
 - Substitute one sound in a word for another; change the /s/ in sun to /f/.

Phonological Processing

WJ IV COG (Extended) Test 12: Nonword Repetition



- Listen to and repeat nonsense words that increase in length (e.g. zab, philistationing)
- Measures phonological short-term memory for speech sounds
- Related to both speech/language impairments and dyslexia

- Although their skills differ, students with dyslexia have poorer nonword repetition skills when compared to age peers and reading-level controls.
- Variability in performance is predicted by oral language skills.
- Students with combined dyslexia and specific language disorders have the most severe nonword repetition impairments.

Melby-Lervag, M., & Lervag, A. (2012). Oral language skills moderate nonword repetition skills in children with dyslexia: A meta-analysis of the role of nonword repetition skills in dyslexia. *Scientific Studies of Reading, 16*, 1-34.

Phonological Processing

WJ IV OL Test 3: Segmentation



This test combines with Blending to form the WJ IV OL Phonetic Coding cluster, and includes the two most important early phonological awareness abilities:

- Blending
 - Pushing speech sounds together
 - Underlies using phonics for reading
- Segmentation
 - Pulling sounds apart
 - Underlies breaking apart sounds for spelling

Segmentation

- Compound Words
- Syllables
- Phonemes (single speech sounds)

Phonological Processing

When to administer Blending and Segmentation...



- If Word Attack (reading phonically regular nonsense words) is average or above average: **no need to administer Blending and Segmentation.**
- If Word Attack is below average: **administer Blending and Segmentation.**

Phonology and Orthography

Phonology: the sounds of a language

Orthography: the marks of a writing system, including the spelling patterns

Dyslexia can be caused by problems in phonology or orthography or both.

Orthographic Awareness

Test 4: Letter-Pattern Matching



- Provides a measure of perceptual speed and orthographic processing.
- Good readers and spellers will quickly note the matching pair which is a common English spelling pattern (e.g., th, oa); the others are not (e.g., ao, hx).

t	sh	sk
sk	sk	h
sk	l	sk
sk	sk	sk
sk	sk	sk
sk	sk	sk

Working Memory

- **Ability to hold information and then re-order/re-arrange it within a short period of time**
- **Requires memory as well as attentional control**

Short-term Working Memory

WJ IV COG



- **Test 3: Verbal Attention**
 - Listen to a string of numbers and animals, then answer a question.
- **Test 10: Numbers Reversed**
 - Listen to, then repeat, a string of digits in reverse order.
- **Test 16: Object-Number Sequencing**
 - Listen to a string of things and numbers. Then list the things. After things, list the numbers.

Associative Memory

Visual-Auditory Paired Associate Learning (PAL)

“...recent research suggests that visual-verbal PAL may be a unique cross-modal associative learning mechanism that is specific to the creation of mappings between visual (orthographic) and phonological stimuli...” (p. 46).

Warmington, M., & Hulme, C. (2012). Phoneme awareness, visual-verbal paired associate learning, and rapid automatized naming as predictors of individual differences in reading ability. *Scientific Studies of Reading, 16*, 45-62.

“...the learning of mappings between orthography and phonology is critical for learning to read and likely operates at numerous levels, including the process of learning letter-sound correspondences and the learning of mappings at the level of single letters, letter groups, and whole words when acquiring a word recognition system” (p. 47).

Warrington, M., & Hulme, C. (2012). Phoneme awareness, visual-verbal paired associate learning, and rapid automatized naming as predictors of individual differences in reading ability. *Scientific Studies of Reading, 16*, 45-62.

Research Findings regarding RAN

- (a) RAN letters and then numbers are the strongest predictors of both reading and spelling.
- (b) RAN is distinct from phonological awareness.
- (c) the contribution of RAN is larger for younger readers and readers with more severe reading disabilities.

(d) pause time is significantly correlated with reading accuracy and fluency, whereas articulation time is not.

(e) RAN is more highly related to speeded measures of reading than accuracy.

(f) RAN is a good predictor of orthographic skills, but not phonic skills.

Rapid Naming

WJ IV OL Test 4: Rapid Picture Naming



A modified RAN task that along with Retrieval Fluency contributes to the Speed of Lexical Access cluster.

Examinee is asked to name pictures of common objects quickly.

Processing Speed

- **The ability to perform simple clerical tasks quickly using symbols such as letters or numbers**
- Related to orthographic processing and the acquisition of basic skills
- Relevant to a need for extended time

Perceptual Speed

WJ IV COG Tests



- **WJ IV COG Test 4: Letter-Pattern Matching**
- **WJ IV COG (Extended) Test 11: Number-Pattern Matching**

Cognitive Efficiency

WJ IV COG Tests



A measure of short-term working memory and perceptual speed.

Standard Cluster

- Test 4: Letter-Pattern Matching
- Test 10: Numbers Reversed

Extended Cluster WJ IV COG

- Test 3: Verbal Attention
- Test 11: Number-Pattern Matching

Tim's Cognitive Abilities

CLUSTERS	SS	RPI	Proficiency	Implications
FLUID REASONING	113	97/90	avg to adv	easy
VISUAL PROCESSING	100	90/90	average	manageable
PHONEMIC AWARE	131	98/90	advanced	easy
AUDITORY MEM SPAN	111	97/90	avg to adv	easy
L-T RETRIEVAL (Glr)	109	93/90	average	manageable
WORKING MEMORY	85	54/90	limited	very difficult
PERCEPTUAL SPEED	73	56/90	limited	very difficult

Tim's Oral Language and Reading Grade 6

CLUSTER/Test	SS	RPI	Proficiency	Implications
ORAL LANG	104	92/90	average	manageable
READING				
Word Attack	80	16/90	very limited	extremely difficult
Letter-Word Identif.	86	39/90	limited	very difficult
Passage Compre	84	52/90	limited	very difficult
Reading Fluency	75	45/90	limited	very difficult

Conclusion:

Multiple cognitive and linguistic abilities can impact reading and spelling development.

Difficulties and Correlates

Summary

"Perhaps the most significant contribution of this body of work for practitioners at the current time ... is to demonstrate the need for caution against too great an adherence to an overly simplistic phonological model" (p. 81).

A greater emphasis is needed on the role of underlying auditory, visual and attentional factors.

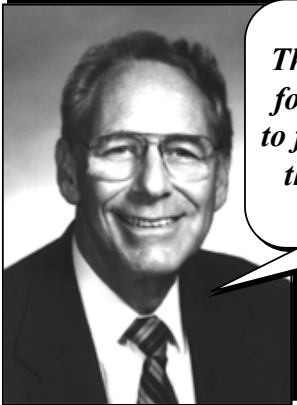
Source: Elliott, J. G., & Grigorenko, E. L. (2014). *The dyslexia debate*. New York, NY: Cambridge University Press.



Dr. Alan Kaufman

... there is a demand for the comprehensive assessment to drive intervention. This is the way it has always been, and this is the way it will always be because the referral questions for children with SLD have always asked, What is wrong? And how can we help? These questions demand differential diagnosis, a large part of which is determined by the cognitive abilities present in the individual child (p. 211).

Source: Kaufman, A. S., Lichtenberger, E. O., Fletcher-Janzen, E., & Kaufman, N. L. (2005). *Essentials of the K-ABC-II Assessment*. New York: John Wiley & Sons.



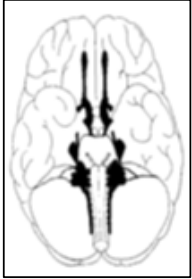
The primary purpose for testing should be to find out more about the problem, not to just get a score.

And to find more about the factors that will facilitate performance...

We shouldn't ask:
How smart you are...

but instead:
How are you smart?

- H. Gardner



Documenting Intact Abilities

- Determine the relevant and relative strengths (intact abilities) for the person's age and the educational and vocational demands.
- Can use the *WJ IV Comparison and Variation* procedures to document both strengths and weaknesses.

C. Ability to Learn When Reading is Not Required
Check the areas that are significantly higher than the individual's reading and spelling skills.

Cognitive Abilities General intelligence Reasoning	Oral Language Oral expression Listening comprehension Vocabulary ⁵	Mathematics Math calculation skills Math problem solving	Knowledge General information ⁴ Academic knowledge ⁴
-----------------------------------------------------------------	-----------------------------------------------------------------------------------------------	-----------------------------------------------------------------------	-----------------------------------------------------------------------------------------

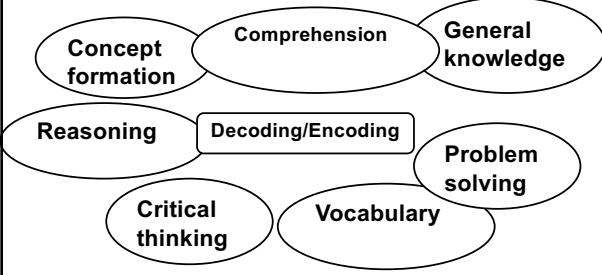
Essence of a Learning Disability

Basic concept of a PSW approach

"...generalized integrity and a deficiency in learning (p. 9)...there is a deficit in learning in the presence of basic integrity" (p. 25).

Source: Johnson, D. J., & Myklebust, H. R. (1967). *Learning disabilities: Educational principles and practices*. New York: Grune & Stratton.

Sea of Strengths Model of Dyslexia



Shaywitz, S. (2003). *Overcoming dyslexia: A new and complete science-based program for reading problems at any level*. New York: Alfred A. Knopf. (p. 58)

Procedures for Dyslexia Identification



Comparisons and Variations

- **Comparisons (or discrepancies):** a score used to predict performance in an area
 - Predicted score is based on score of the predictor (e.g., Broad Oral Language cluster to Basic Reading Skills)
- **Variations:** a comparison of abilities to identify a pattern of strengths and weaknesses
 - Predicted score is based on a core set of other abilities

Procedures for Dyslexia Identification

Two Basic Concepts

- Unexpected underachievement**
- Expected underachievement**

Procedures for Dyslexia Identification

Basic Concepts - Unexpected Underachievement

Reading performance is below what would be predicted based upon one's other cognitive/linguistic and/or academic abilities (e.g., oral vocabulary, math). (Discrepancy model).

Procedures for Dyslexia Identification

Basic Concepts - Expected Underachievement

Reading performance is in line with cognitive/linguistic weaknesses- the weakness(es) predict the poor academic performance (e.g., poor phonological awareness predicts poor phonics skills). (Consistency model)

Procedures for Dyslexia Identification

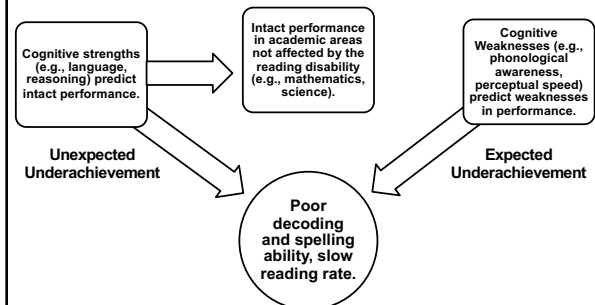
Basic Concepts

“We are coming to recognize that deficiencies in certain cognitive processes are indicators of LD that predict and, therefore, result in expected underachievement” (p. 239).

Source: Learning disabilities: Implications for policy regarding research and practice: A report by the National Joint Committee on Learning Disabilities March 2011. *Learning Disability Quarterly*, 34, 237-241.

Procedures for Dyslexia Identification

Basic Concepts



“Knowledgeable practitioners also use clinical judgment to determine which approach is applicable for a given child or in a given school setting. While regulations and policies require school districts to implement a single approach, best practice may reside somewhere in the margins with a hybrid model” (p. 6).

Source: Kovaleski, J. F., Lichtenstein, R., Naglieri, J., Ortiz, S. O., Klotz, M. B., & Rossen, E. (2015). Current perspective in the identification of specific learning disabilities. *Communique*, 44(4), 4, 6.

Two Procedures for Dyslexia Identification

- **Comparisons (discrepancies) between overall ability (Gf-Gc Composite, General Intellectual Ability) or Oral Language Ability, Academic Knowledge) and reading performance**
- **Variations among abilities: a pattern of strengths and weaknesses (intra-individual variations)**

Procedures for Dyslexia Evaluation

Three Most Relevant Clusters for Ability-Achievement Comparisons

- **WJ IV Tests of Cognitive Abilities**
 - *Gf-Gc Composite/Other Ability*
- **WJ IV Tests of Oral Language**
 - Broad Oral Language Cluster
- **WJ IV Tests of Achievement**
 - Academic Knowledge Cluster

Compare Cluster Scores to:

WJ IV Tests of Achievement

- Basic Reading Skills
- Phoneme-Grapheme Knowledge
- Reading Fluency
- Reading Rate

Procedures for Dyslexia Evaluation

Some Abilities are More Important than Others



Reasoning (*Gf*)
Oral Language (*Gc*)

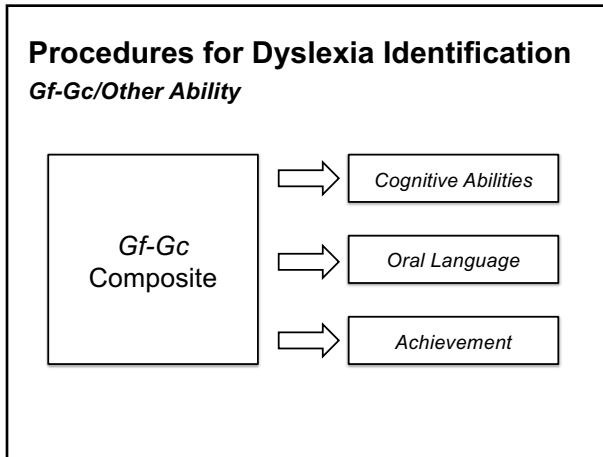
Phonological Awareness (*Ga*)
Perceptual Speed (*Gs*)

Procedures for Dyslexia Evaluation

Gf-Gc/Other Ability

Compares *Gf-Gc* composite to current levels of achievement or oral language abilities or other cognitive abilities to determine if a discrepancy exists.

- Requires *Gf-Gc* composite (*WJ IV COG Tests 1, 2, 8, 9*)
- Determines the presence of significant strengths or weaknesses between an individual's higher-level, more complex abilities (*reasoning and knowledge*) and his or her achievement, and other abilities (*cognitive or oral language*)



Procedures for Dyslexia Identification
Additional Resources

Assessment Service Bulletin Number 3
The WJ IV™ Gf-Gc Composite and Its Use in the Identification of Specific Learning Disabilities

Frederick A. Schrank, PhD, ABPP
Kevin S. McGrew, PhD
Nancy Mather, PhD

Can obtain at: <http://bit.ly/WJIVASB3> under Additional Resources.

- In general, many students with dyslexia have higher scores on measures of:
- Oral language
 - Knowledge
 - Reasoning
 - Mathematics
- with lower scores on measures of:
- Basic reading skills
 - Reading fluency and rate
 - Spelling
 - Specific cognitive correlates

Procedures for Dyslexia Identification

Comparison of Oral Language to Reading Tests

Predictor Clusters for Comparison

Broad Oral Language

- Basic Reading Skills
- Phoneme-Grapheme Knowledge
- Reading Fluency and Rate

Is reading achievement in line with oral language ability?

Procedures for Dyslexia Identification

Oral Language tests to Reading tests

Oral Language		Reading
Story Recall		Reading Recall
Oral Vocabulary		Reading Vocabulary
Oral Comprehension		Passage Comprehension

Procedures for Dyslexia Identification
Verbal Ability as an Estimate of Reading Potential

“ Children should be able to comprehend, or construct, the meaning of what is being read at a level consistent with their general verbal ability” (p.55).

Source: Torgesen, J. K. (2000). Individual differences in response to early interventions in reading: The lingering problem of treatment resisters. *Learning Disabilities Research & Practice, 15*, 55-64.


Woodcock Johnson
Years of Achievement

Academic Knowledge/Reading Comparisons

- Academic Knowledge is used to predict achievement; full length tests of Science, Social Studies, and Humanities are administered orally
- Academic Knowledge can be compared to all reading and writing clusters
- Helps determine if reading and writing are discrepant from Academic Knowledge


Strengths

Oral language and reasoning



Weaknesses

Decoding, spelling, speed of word perception



Procedures for Dyslexia Evaluation


Four Variation Procedures

- Intra-Cognitive
- Intra-Oral Language
- Intra-Achievement
- Academic Skills/Academic Fluency/Academic Applications

Four variation procedures help document an individual's pattern of strengths and weaknesses based on the "core" tests in each battery.

Procedures for Dyslexia Evaluation

Core Tests



- WJ IV COG: Tests 1-7
- WJ IV OL: Tests 1-4
- WJ IV ACH: Tests 1-6

Cognitive Standard Battery (Tests 1-10)

- Test 1: Oral Vocabulary (Gc)
- Test 2: Number Series (Gf)
- Test 3: Verbal Attention (Gwm)
- Test 4: Letter-Pattern Matching (Gs)
- Test 5: Phonological Processing (Ga)
- Test 6: Story Recall (Glr)
- Test 7: Visualization (Gv)
- Test 8: General Information (Gc)
- Test 9: Concept Formation (Gf)
- Test 10: Numbers Reversed (Gwm)

Core Tests (1-7)
GIA
Required for Intra-COG Variation

Intra-Achievement Variation Procedures

VARIATIONS	Actual	STANDARD SCORES Predicted	Difference	DISCREPANCY PR	SD	Interpretation at ± 1.90 SD (SEE)
Intra-Achievement/ (Extended) Variations						
BASIC READING SKILLS	92	100	-8	14	-1.10	--
READING COMPREHENSION	92	101	-9	12	-1.16	--
READING COMP-EXTENDED	92	101	-9	14	-1.08	--
READING FLUENCY	87	100	-13	6	-1.53	Weakness
READING RATE	89	101	-12	12	-1.17	--
MATH CALCULATION SKILLS	99	99	0	49	-0.03	--
MATH PROBLEM SOLVING	97	99	-2	42	-0.21	--
BASIC WRITING SKILLS	94	100	-6	24	-0.72	--
WRITTEN EXPRESSION	113	96	17	95	+1.69	Strength
Letter-Word Identification*	93					--
Applied Problems*	100					--
Spelling*	94					--
Passage Comprehension*	90					--
Calculation*	99					--
Written Samples*	110					Strength
Word Attack	89					--
Oral Reading	83					Weakness
Sentence Reading Fluency	92	101	-9	16	-0.98	--
Math Facts Fluency	99	100	-1	49	-0.02	--
Sentence Writing Fluency	100	97	3	64	+0.35	--

6 Core tests – average other 5 to obtain the predictor

For additional tests and clusters, the predicted score is based on the same predictor as the core test (ACH 1-6) that measures a similar skill.
Example:
If Test 7: Word Attack were administered, both the Word Attack test and Basic Reading Skills cluster would be added into the variation procedure. They would be compared to the same predictor (the average of the other 5 core tests-Tests 2-6) as Test 1: Letter-Word Identification, a measure of basic reading skills.

Cross-Academic Clusters

	Tests from Standard Battery	Total Achievement	Academic Skills	Academic Fluency	Academic Applications
Reading	Letter-Word Identification	✓	✓		
	Reading Fluency	✓		✓	
	Passage Comp.	✓			✓
Math	Calculation	✓	✓		
	Math Fluency	✓		✓	
	Applied Problems	✓			✓
Written Language	Spelling	✓	✓		
	Writing Fluency	✓		✓	
	Writing Samples	✓			✓

Academic Skills/Fluency/Application
Within the WJ IV ACH, you can compare:

- Academic Skills (basic academic skills)
- Academic Fluency (timed measures)
- Academic Applications (problem solving and reasoning)

Many individuals with dyslexia will have:
Academic Applications cluster > Academic Skills or Academic Fluency clusters.

Randy, Grade 11

VARIATIONS	STANDARD SCORES			DISCREPANCY		Interpretation at + or - 1.96 SD (SEE)
	Actual	Predicted	Difference	EB	SD	
Academic Skills/Academic Fluency/Academic Applications (Extended) Variations						
ACADEMIC SKILLS	78	102	-24	-0.1	-3.26	Weakness
ACADEMIC FLUENCY	97	94	3	62	+0.29	—
ACADEMIC APPLICATIONS	107	89	18	97	+1.86	Strength

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WJ III Academic Fluency Cluster was the single most important variable in differentiating between college students with and without learning disabilities.

CHC CFA of WJ-III, WAIS-III, WMS-III and KAIT- University Students with and without LD
(McGrew, Gregg, Hoy, Stennett, Davis, Knight, Coleman & Ford, 2001)

Reading Fluency/Rate Clusters

- Reading Fluency (Oral and Silent Reading)
 - Oral Reading (Oral)
 - Sentence Reading Fluency (Silent)
- Reading Rate (Silent Reading)
 - Sentence Reading Fluency
 - Word Reading Fluency

D. At-Risk Indicators

Check the areas below that are additional at-risk factors.

- Family history Early speech-language concerns

Two questions you want to ask:

Did anyone in the family have difficulty learning to read?

Did the student have difficulty with speech or language development?

Hereditary Factors

Strong converging evidence suggests that:

- 1. Dyslexia has a genetic basis but there is not one specific gene for reading.**
- 2. Family history is a key risk indicator.**

Reason for Referral

- Brayden's mother is concerned about his struggle with reading despite numerous interventions in the past
- The conclusion from prior testing has always been that the problem is "developmental" with the assumption that he will catch up.
- Teachers have expressed concerns about effort and attention.
- The mother wishes to know what factors are impeding performance and what they can do to help their son.

Brayden

- Grade 3.8
 - Age 9-8
- Moved states and schools five times
Home schooled at times

Intra-Achievement Variations

VARIATIONS	STANDARD SCORES			DISCREPANCY		Interpretation at + or -1.50 SD (S)
	Actual	Predicted	Difference	PR	SD	
Intra-Achievement (Extended) Variations						
BASIC READING SKILLS	82	101	-19	1	-2.44	Weakness
READING COMPREHENSION	95	98	-3	35	-0.37	--
READING FLUENCY	77	101	-24	0.4	-2.67	Weakness
READING RATE	78	99	-21	2	-2.01	Weakness
MATH CALCULATION SKILLS	111	96	15	92	+1.42	--
MATH PROBLEM SOLVING	113	96	17	94	+1.55	Strength
BASIC WRITING SKILLS	89	103	-14	10	-1.29	--
Letter-Word Identification	80	101	-21	0.4	-2.62	Weakness
Applied Problems	112	95	17	94	+1.52	Strength
Spelling	89	103	-14	12	-1.19	--
Passage Comprehension	95	98	-3	34	-0.41	--
Calculation	107	96	11	85	+1.02	--
Writing Samples	105	97	8	74	+0.66	--
Word Attack	84	101	-17	6	-1.54	Weakness
Oral Reading	87	101	-14	10	-1.27	--
Sentence Reading Fluency	76	99	-23	1	-2.23	Weakness
Math Facts Fluency	112	97	15	93	+1.29	--
Reading Recall	37	99	-2	42	-0.21	--
Number Matrices	111	97	14	86	+1.06	--
Editing	88	103	-12	11	-1.23	--
Word Reading Fluency	81	99	-18	5	-1.62	Weakness
Spelling of Sounds	92	103	-8	24	-0.70	--

Intra-Cognitive Variations

VARIATIONS	STANDARD SCORES			DISCREPANCY		Interpretation at + or -1.50 SD (S)
	Actual	Predicted	Difference	PR	SD	
Intra-Cognitive (Extended) Variations						
COMP-KNOWLEDGE (Gc)	117	93	24	97	+1.93	Strength
COMP-KNOWLEDGE 3	118	93	25	98	+2.07	Strength
FLUID REASONING (Gf)	111	94	17	95	+1.65	Strength
FLUID REASONING 3	111	94	17	96	+1.76	Strength
S-TERM WORK MEM (Gsm)	81	98	-17	8	-1.44	--
S-TERM WORK MEM 3	88	98	-10	18	-0.92	--
COG PROCESS SPEED (Gs)	76	100	-24	4	-1.80	Weakness
AUDITORY PROCESS (Ga)	90	99	-9	24	-0.70	--
L-TERM RETRIEVAL (Gh)	94	99	-5	34	-0.42	--

Intra-Cognitive Variations

VARIATIONS	STANDARD SCORES			DISCREPANCY		Interpretation at + or -1.50 SD (SEE)
	Actual	Predicted	Difference	PR	SD	
Intra-Cognitive [Extended] Variations						
VISUAL PROCESSING (Dv)	119	95	24	96	+1.76	Strength
QUANTITATIVE REASONING	110	94	16	95	+1.62	Strength
AUDITORY MEMORY SPAN	95	98	-3	98	-0.30	--
PERCEPTUAL SPEED	75	100	-25	2	-1.98	Weakness
VOCABULARY	119	93	26	99	+2.29	Strength
ORAL LANGUAGE	111	93	18	93	+1.49	--
PHONETIC CODING	118	99	19	93	+1.51	Strength
Oral Vocabulary	119	93	26	99	+2.36	Strength
Number Series	111	95	16	91	+1.35	--
Verbal Attention	99	98	-9	22	-0.76	--
Letter-Pattern Matching	75	100	-25	3	-1.92	Weakness
Phonological Processing	83	99	-16	8	-1.37	--
Story Recall	85	99	-14	13	-1.14	--
Visualization	114	95	19	93	+1.45	--
General Information	115	94	21	93	+1.47	--

Intra-Oral Language Variations

VARIATIONS	STANDARD SCORES			DISCREPANCY		Interpretation at + or -1.50 SD (SEE)
	Actual	Predicted	Difference	PR	SD	
Intra-Oral Language [Extended] Variations						
ORAL EXPRESSION	104	102	2	58	+0.20	--
PHONETIC CODING	118	103	15	87	+1.12	--
VOCABULARY	119	102	17	94	+1.53	Strength
AUDITORY PROCESS (Ga)	90	103	-13	18	-0.90	--

Gf-Gc Composite Comparison

COMPARISONS	STANDARD SCORES			DISCREPANCY		Interpretation at + or -1.50 SD (SEE)
	Actual	Predicted	Difference	PR	SD	
Gf-Gc Composite/Other Ability Comparisons						
S-TERM WORK MEM 3	88	110	-22	3	-1.88	Weakness
ODD PROCESS SPEED (Sb)	76	108	-30	1	-2.23	Weakness
PERCEPTUAL SPEED	73	107	-32	1	-2.38	Weakness
AUDITORY PROCESS (Sb)	90	109	-19	8	-1.54	Weakness
PHONETIC CODING	118	108	10	77	+0.74	--
L-TERM RETRIEVAL (Sb)	94	109	-15	11	-1.20	--
VISUAL PROCESSING (Sb)	118	108	11	79	+0.81	--
AUDITORY MEMORY SPAN	95	107	-12	16	-0.98	--
NUMBER FACILITY	75	108	-33	5.5	-2.58	Weakness
COGNITIVE EFFICIENCY	73	109	-36	5.3	-2.76	Weakness
ODD EFFICIENCY (Sb)	74	109	-35	5.2	-2.82	Weakness
BRIEF ACHIEVEMENT	91	112	-21	1	-2.84	Weakness
READING	85	112	-27	5.5	-2.89	Weakness
BROAD READING	82	111	-29	5.2	-2.81	Weakness
BASIC READING SKILLS	82	110	-28	5.5	-2.58	Weakness
READING COMPREHENSION	95	111	-16	8	-1.52	Weakness
READING FLUENCY	77	109	-32	5.3	-2.73	Weakness
READING RATE	78	108	-30	1	-2.48	Weakness
MATHEMATICS	110	112	-2	42	-0.21	--
BROAD MATHEMATICS	112	112	0	49	-0.02	--
MATH CALCULATION SKILLS	111	110	1	51	+0.51	--
MATH PROBLEM SOLVING	113	112	1	51	+0.03	--
WRITTEN LANGUAGE	96	110	-14	10	-1.38	--
BASIC WRITING SKILLS	89	110	-21	3	-1.96	Weakness
ACADEMIC SKILLS	89	112	-23	2	-2.12	Weakness
ACADEMIC APPLICATIONS	104	113	-9	18	-0.88	--
PHONEME GRAPHEME KNOW	87	109	-22	3	-1.89	Weakness

GIA/Achievement Comparisons

COMPARISONS	STANDARD SCORES			DISCREPANCY		Significant at + or -1.50 SD (SEE)
	Actual	Predicted	Difference	PR	SD	
GIA/Achievement Discrepancy Procedures						
BRIEF ACHIEVEMENT	91	95	-4	24	-0.42	No
READING	85	95	-10	17	-0.96	No
BROAD READING	82	95	-14	8	-1.42	No
BASIC READING SKILLS	82	95	-13	9	-1.34	No
READING COMPREHENSION	95	95	0	49	-0.03	No
READING FLUENCY	77	95	-18	5	-1.67	Yes ()
READING RATE	78	95	-18	5	-1.65	Yes ()

Academic Knowledge/Achievement Comparisons

COMPARISONS	STANDARD SCORES			DISCREPANCY		Significant at + or -1.50 SD (SEE)
	Actual	Predicted	Difference	PR	SD	
Academic Knowledge/Achievement Comparisons						
BRIEF ACHIEVEMENT	91	106	-15	10	-1.29	No
READING	85	107	-22	5	-1.67	Yes ()
BROAD READING	82	106	-24	3	-1.85	Yes ()
BASIC READING SKILLS	82	105	-23	3	-1.91	Yes ()
READING COMPREHENSION	95	106	-11	21	-0.82	No
READING FLUENCY	77	104	-27	3	-1.93	Yes ()
READING RATE	78	104	-26	3	-1.83	Yes ()
MATHEMATICS	110	106	4	62	+0.30	No
BROAD MATHEMATICS	112	106	6	68	+0.45	No
MATH CALCULATION SKILLS	111	106	5	64	+0.36	No
MATH PROBLEM SOLVING	113	106	7	70	+0.51	No
WRITTEN LANGUAGE	96	106	-10	21	-0.82	No
BASIC WRITING SKILLS	89	106	-17	8	-1.39	No
ACADEMIC SKILLS	89	106	-17	9	-1.31	No
ACADEMIC APPLICATIONS	104	106	-4	39	-0.29	No
PHONETIC CODING	118	104	14	84	+0.98	No

Possible Recommendations

- Consult with Brayden's pediatrician regarding ADHD.
- Collect rating scales from last year's teachers.
- Consider eligibility for SLD services.
- Provide preferential seating in the front of the room near the teacher's desk.
- Break assignments into smaller segments.
- After listening to directions, ask Brayden to paraphrase what he is supposed to do.

Reading

- Begin an online reading intervention, Mindplay Virtual Reading Coach (MVRC), 30 minutes 5 times a week during the summer, continuing into the school year (www.mindplay.com).
- Continue working with a reading specialist who understands evidence-based reading instruction; the initial instruction should focus on structural analysis, breaking words into parts to make them easier for Brayden to pronounce.

Mathematics

Continue tutoring in mathematics:

- Reteach the concept of place value.
- Review two-digit multiplication.
- Review simple division.
- Provide practice counting money.

Consider use of an online math program, such as ALEKS to supplement instruction (<https://www.aleks.com>).

“Failure to learn to read as others do is a major catastrophe in a child’s life” (p.1).

Source:

Dolch, E. W. (1939). *A manual for remedial reading*. Champaign, IL: Garrard Press.

Self-Esteem

“My ignorance of my dyslexia only intensified my sense of isolation and hopelessness. Ignorance is perhaps the most painful aspect of a learning disability.” (p. 64).

Source: Schultz, P. (2011). *My dyslexia*. New York, NY: W. W. Norton & Company.

Summary

When identifying dyslexia, consider:

- Weaknesses in phonics, sight word identification, reading fluency and rate, and spelling
- Weaknesses in specific cognitive/linguistic abilities
- Relative strengths in other areas, such as oral language, reasoning, mathematics, knowledge

Diagnosis and Instruction

“Diagnosis must take *second* place to instruction, and must be made a *tool of instruction*, not an end in itself.”

Source: Cruickshank, W.M. (1977). Least-restrictive placement: Administrative wishful thinking. *Journal of Learning Disabilities*, 10, 193-194.

The Value of Tests

“If these tests will give us a basis from which we can start to understand a child’s difficulties, they will have justified the time spent on them. Anything which helps educators or parents to **understand** any phase of development or lack of development is of immeasurable value” (p. 189).

Source: Stanger, M. A., & Donohue, E. K. (1937). *Prediction and prevention of reading difficulties*. New York, NY: Oxford University Press.

DYSLEXIA PROFILE
(For use with the WJ IV¹)

Name _____ Date of Birth _____ ID _____
 School _____ Grade _____ Testing Date _____

The [name of state] Education Code [§ statute number] [or country] defines dyslexia in the following way:

International Dyslexia Association Definition (2002)

Dyslexia is a specific learning disability that is neurological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities. These difficulties typically result from a deficit in the phonological component of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction. Secondary consequences may include problems in reading comprehension and reduced reading experience that can impede the growth of vocabulary and background knowledge.

Authors' note: Dyslexia affects reading at the single word level, reading fluency and rate, and spelling. In turn, these deficits cause difficulties with reading comprehension and written expression. According to research, the major cognitive correlates of dyslexia include weaknesses in one or more of the following abilities: phonological awareness, orthographic awareness, memory, rapid naming, and processing speed. Other abilities, such as general intelligence, reasoning, oral language, mathematics, and knowledge, that do not require reading, are often unimpaired. In other words, the reading and spelling difficulties are often unexpected in relation to the student's other abilities.

Section I: Summary

A. Primary and Secondary Reading, Spelling, and Writing Difficulties

Check the areas of concern.

Primary Reading and Spelling Difficulties	Secondary Reading and Writing Difficulties
<input type="checkbox"/> Letter-sound associations <input type="checkbox"/> Letter names <input type="checkbox"/> Letter sounds <input type="checkbox"/> Basic reading skills <input type="checkbox"/> Sight word identification <input type="checkbox"/> Phonics (nonword/word decoding) <input type="checkbox"/> Reading fluency and rate <input type="checkbox"/> Spelling <input type="checkbox"/> in isolation <input type="checkbox"/> in context	<input type="checkbox"/> Reading comprehension <input type="checkbox"/> Written expression

B. Cognitive and Linguistic Abilities: Possible Contributing Factors

Check the areas that are possible contributing factors.

<input type="checkbox"/> Phonological awareness ² <input type="checkbox"/> Auditory processing <input type="checkbox"/> Phonetic coding	<input type="checkbox"/> Orthographic awareness ³	<input type="checkbox"/> Memory <input type="checkbox"/> Auditory memory span <input type="checkbox"/> Short-term working memory <input type="checkbox"/> Associative memory	<input type="checkbox"/> Rapid naming <input type="checkbox"/> Processing speed
----------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------

C. Ability to Learn When Reading is Not Required

Check the areas that are significantly higher than the individual's reading and spelling skills.

Cognitive Abilities	Oral Language	Mathematics	Knowledge
<input type="checkbox"/> General intelligence <input type="checkbox"/> Reasoning	<input type="checkbox"/> Oral expression <input type="checkbox"/> Listening comprehension <input type="checkbox"/> Vocabulary ⁵	<input type="checkbox"/> Math calculation skills <input type="checkbox"/> Math problem solving	<input type="checkbox"/> General information ⁴ <input type="checkbox"/> Academic knowledge ⁴

D. At-Risk Indicators

Check the areas below that are additional at-risk factors.

Family history Early speech-language concerns

Committee Consideration

Data demonstrate characteristics of dyslexia. Data demonstrate characteristics of dyslexia; however, these characteristics would not be consistent with [State] guidelines for the identification of dyslexia.
 Data do not demonstrate characteristics of dyslexia.

Evaluator(s) _____ Date: _____

Section II: Scores
(For use with the WJ IV¹)

Area Tested	Battery	Cluster/Test	Standard Score	Percentile Rank	SS/PR Classification	RPI ⁶
Primary Reading and Spelling Difficulties	Letter-Sound Associations	Informal Letter names: <input type="checkbox"/> Poor <input type="checkbox"/> Typical <input type="checkbox"/> Advanced Case: Lower ___/26 Upper ___/26 Letter sounds: <input type="checkbox"/> Poor <input type="checkbox"/> Typical <input type="checkbox"/> Advanced Consonants ___ Vowels ___				
	Basic Reading Skills	WJ IV ACH	Test 1: Letter-Word Identification			___/90
			Test 7: Word Attack			___/90
	Reading Fluency/Rate	WJ IV ACH	Reading Fluency			___/90
			Test 8: Oral Reading			___/90
			Test 9: Sentence Reading Fluency			___/90
			Reading Rate			___/90
			Test 9: Sentence Reading Fluency			___/90
	Spelling	WJ IV ACH	Test 3: Spelling			___/90
			Test 16: Spelling of Sounds			___/90
			Spelling in Context: <input type="checkbox"/> Poor <input type="checkbox"/> Typical <input type="checkbox"/> Adv. (Test 6: Writing Samples)			
	Phoneme - Grapheme Knowledge	WJ IV ACH	Phoneme-Grapheme Knowledge			___/90
			Test 7: Word Attack			___/90
Test 16: Spelling of Sounds					___/90	
Secondary Reading and Writing Difficulties	Reading Comprehension	WJ IV ACH	Reading Comprehension			___/90
			Test 4: Passage Comprehension			___/90
			Test 12: Reading Recall			___/90
			Test 17: Reading Vocabulary (Ext.)			___/90
	Written Expression	WJ IV ACH	Written Expression			___/90
			Test 6: Writing Samples			___/90
			Test 11: Sentence Writing Fluency			___/90

Area Tested	Battery	Test Date	Cluster/Test	Standard Score	Percentile Rank	SS/PR Classification	RPI ⁶
Cognitive and Linguistic Abilities: Possible Contributing Factors	Phonological Awareness ²	WJ IV COG	Auditory Processing				___/90
			Test 5: Phonological Processing				___/90
			Test 12: Nonword Repetition				___/90
		WJ IV OL	Phonetic Coding				___/90
			Test 3: Segmentation				___/90
			Test 7: Sound Blending				___/90
	WJ IV ACH	Test 9: Sound Awareness				___/90	
		Test 7: Word Attack ⁴				___/90	
	Orthographic Awareness ³	WJ IV COG	Test 4: Letter-Pattern Matching				___/90
			Test 11: Number-Pattern Matching				___/90
		WJ IV ACH	Test 1: Letter-Word Identification				___/90
			Test 3: Spelling				___/90
	Memory	WJ IV OL	Test 7: Word Attack ⁴				___/90
			Test 16: Spelling of Sounds ⁴				___/90
		WJ IV COG	Auditory Memory Span				___/90
			Test 5: Sentence Repetition				___/90
			Test 18: Memory for Words				___/90
			Short-Term Working Memory				___/90
			Test 3: Verbal Attention				___/90
	WJ IV COG	Test 10: Numbers Reversed				___/90	
		Test 16: Object-Number Sequencing (Ext.)				___/90	
	Rapid Naming	WJ IV OL	Associative Memory				___/90
			Test 13: Visual-Auditory Learning				___/90
			Speed of Lexical Access				___/90
Processing Speed	WJ IV OL	Test 4: Rapid Picture Naming				___/90	
		Test 8: Retrieval Fluency				___/90	
		Cognitive Processing Speed				___/90	
	WJ IV COG	Test 4: Letter-Pattern Matching				___/90	
		Test 17: Pair Cancellation				___/90	
		Perceptual Speed				___/90	
WJ IV COG	Test 4: Letter-Pattern Matching				___/90		
	Test 11: Number-Pattern Matching				___/90		

Cognitive and Linguistic Abilities: Possible Contributing Factors/Comments

Area Tested	Battery	Cluster/Test	Standard Score	Percentile Rank	SS/PR Classification	RPI ⁶	
Ability to Learn When Reading is Not Required		WJ IV COG	General Intellectual Ability (GIA)			___/90	
			Test 1: Oral Vocabulary (<i>Gc</i>)			___/90	
			Test 2: Number Series (<i>Gf</i>)			___/90	
			Test 3: Verbal Attention (<i>Gwm</i>)			___/90	
			Test 4: Letter-Pattern Matching (<i>Gs</i>)			___/90	
			Test 5: Phonological Processing (<i>Ga</i>)			___/90	
			Test 6: Story Recall (<i>Glr</i>)			___/90	
			Test 7: Visualization (<i>Gv</i>)			___/90	
	Reasoning and Knowledge	WJ IV COG	Test 15: Analysis-Synthesis				
			Gf-Gc Composite				___/90
			Test 1: Oral Vocabulary (<i>Gc</i>)				___/90
			Test 2: Number Series (<i>Gf</i>)				___/90
			Test 8: General Information (<i>Gc</i>)				___/90
	Oral Language	WJ IV OL	Oral Expression				___/90
			Test 1: Picture Vocabulary				___/90
			Test 5: Sentence Repetition				___/90
			Listening Comprehension				___/90
		WJ IV COG	Test 2: Oral Comprehension				___/90
			Test 6: Understanding Directions				___/90
			Vocabulary⁵				___/90
			Test 1: Picture Vocabulary				___/90
	Mathematics	WJ IV ACH	Math Calculation Skills				___/90
			Test 5 Calculation				___/90
			Test 10: Math Facts Fluency				___/90
			Math Problem Solving				___/90
			Test 2: Applied Problems				___/90
			Test 13: Number Matrices				___/90
	Knowledge	WJ IV COG	Test 8: General Information ⁵				___/90
		WJ IV ACH	Academic Knowledge⁵				___/90
			Test 18: Science				___/90
Test 19: Social Studies						___/90	
Test 20: Humanities						___/90	

Determination of Characteristics of Dyslexia for Committee Consideration/Additional Comments

1. The Dyslexia Profile was adapted for use with the Woodcock-Johnson IV Tests of Cognitive Ability, Tests of Achievement, and Tests of Oral Language.
2. If the student exhibits reading and spelling difficulties and currently has average phonological/phonemic awareness, review the student’s history to determine if there is evidence of previous interventions with phonological/phonemic awareness. Prior effective instruction in phonological/phonemic awareness may remediate these skills in isolation. Thus, average phonological awareness scores alone do not rule out the existence of dyslexia. Ongoing phonological awareness deficits can also be exhibited in word reading and/or spelling.
3. A weakness in orthographic awareness can be a significant contributing factor to dyslexia. Orthographic awareness is often assessed through tests of irregular word reading and spelling. A person’s recognition and retrieval of orthographic patterns may be ascertained by analysis of the patterns of responses, as well as the scores, on measures of exception word reading and spelling. Students with a weakness in orthographic awareness are more successful in reading and spelling phonically regular words than irregular words and tend to spell irregular words the way they sound, rather than the way they look.
4. Test 7: Word Attack and Test 16: Spelling of Sounds are measures of phonics decoding and encoding skills (sounding out or spelling unfamiliar or nonsense words using blending and letter-sound correspondences). They are not pure phonological awareness tasks because they involve letters; however, both phonological and orthographic awareness are both required to read and spell nonsense words.
5. Consider that as a person grows older, limited reading affects the development of vocabulary and knowledge.
6. The Relative Proficiency Index (RPI) is derived from a mathematical prediction based on the normative data. It predicts a person’s expected percentage of proficiency for tasks that the comparison group (age or grade) would perform with 90 percent proficiency. The RPI is recorded as two numbers separated by a slash (/). The first number is the person’s expected level of proficiency; the second number is always 90, the criterion of mastery. For example, Jeremy’s Word Attack score of 47/90 indicates that when reading unfamiliar words at grade level, his proficiency is likely to be 47% when his average age- or grade-peer’s proficiency would be 90%. The following table presents the level of proficiency and the instructional implications of some possible RPI ranges when the person is doing grade- or age-level work (Mather & Jaffe, 2016).

RPI	Proficiency	Instructional Implications
67/90 to 82/90	Limited to Average	Difficult
82/90 to 95/90	Average	Manageable

RPI	Proficiency	Instructional Implications
95/90 to 98/90	Average to Advanced	Easy
98/90 to 100/90	Advanced	Very Easy

Reference: Mather, N., & Jaffe, L. (2016). *Woodcock-Johnson IV: Recommendations, reports, and strategies*. Hoboken, NJ: John Wiley & Sons.