WJ IV

Using Variations & Comparisons to Inform Instructional Recommendations

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Learning Objectives

01 Understand how the variation & comparison procedures can be used to inform instructional recommendations

02 Explore how variation & comparison procedures can inform our understanding of the examinee

03 Understand the implications for treatment/educational planning based on an analysis of variation and comparison procedures

Mini-Case Study #1
Sarah

CONFIDENTIAL

Any Institution School District

PSYCHOEDUCATIONAL ASSESSMENT REPORT

Name: Sarah Student
Birthdate: 10/13/2012
Age: 11
Grade: 5th
Race & Ethnicity: White
Primary Language (Home): English

School: Any Institution School
Teacher: Mr. Educator
Current Placement: General Education
Dates of Assessment: *See Below*
Student Identification: 00000
Native Language: English

Brief Background

Referred for private psychoed eval by mother due to struggles in mathematics noted in-class and on homework. **No issues in any other core content area.**

Currently enrolled in gen ed. classroom

Receives supplementary tutoring afterschool from SPED teacher for math calculation

Challenges persist despite afterschool support

WJ IV ACH Test Selection Rationale

Psychologist administers the following tests:

- Test 2: Applied Problems
- Test 5: Calculation
- Test 10: Math Facts Fluency
- Also, administered Tests 1, 3, 4, and 6

Intra-Achievement Variation Procedures

WJ IV ACH

Requires At Minimum: Tests 1-6

Analyze variability within an examinee's academic profile

Can be useful for:

- Instructional planning
- Identifying relative strengths and weaknesses
- Forming diagnostic and clinical impressions

Interpreting Sarah's Intra-Achievement Math Variations

VARIATIONS	STANDARD SCORES Actual	Predicted	Difference	DISCREPANCY PR	SD	Interpretation at + or - 1.50 SD (SEE)
Intra-Achievement Variations						
Applied Problems	54	81	-27	1	-2.40	Weakness
Calculation	100	89	11	86	+.80	--
Math Facts Fluency	70	90	-20	4	-1.60	Weakness

Behavioral Observations

Applied Problems: Sarah appeared to have limited understanding of age/grade appropriate math application tasks

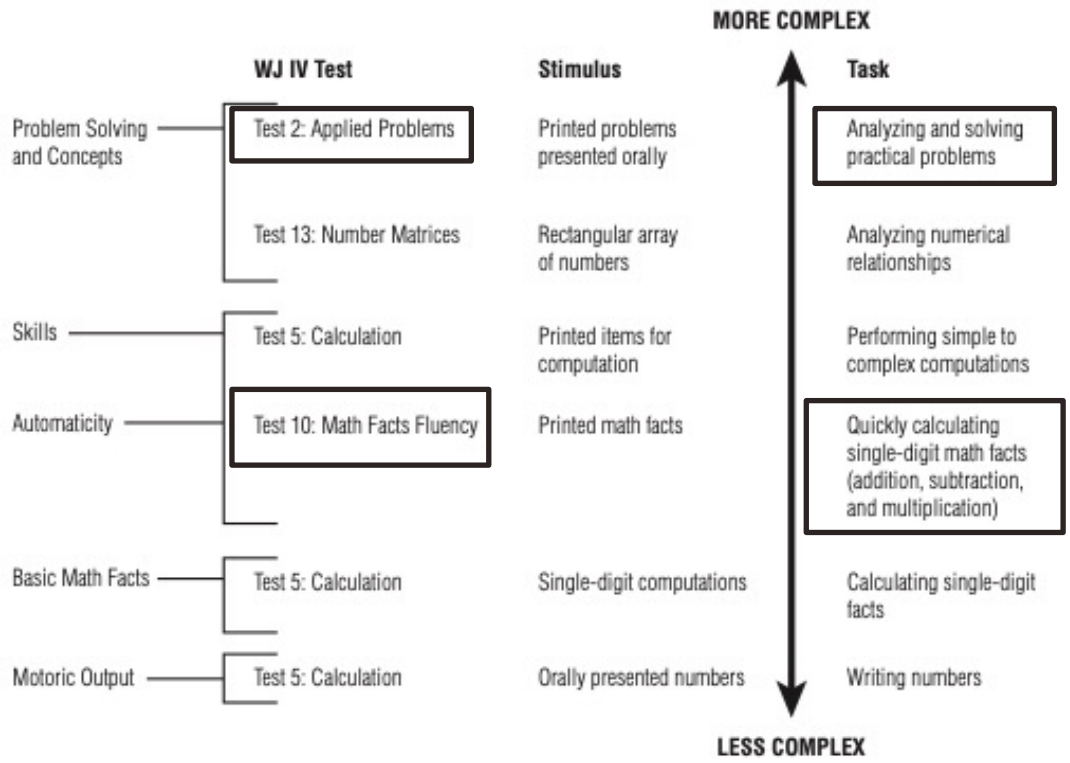
Calculation: Sarah solved initial problems with ease, but demonstrated less automaticity as task progressed, which was deemed to be typical

Math Facts Fluency: Sarah solved problems slowly and appeared to have difficulty maintaining her concentration, despite minimal extraneous noise/distractions

All data are fictional. Table reflects only math tasks administered for ease of interpretation.

Interpreting Sarah's Intra-Achievement Math Variations: Using the WJ IV's Task Complexity Charts

Figure 5-3.
Various skills measured by the WJ IV ACH math tests.



WJ IV COG Test Selection Plan for Sarah

Psychologist selects the following tests:

- Test 2: Number Series
- Test 4: Letter-Pattern Matching
- Test 9: Concept Formation
- Test 15: Analysis-Synthesis
- Test 17: Pair Cancellation
- Also, administered Tests 1, 3, 5, and 7

Intra-Cognitive Variation Procedures

WJ IV COG

Requires At Minimum: Tests 1-7

Analyze variability within an examinee's cognitive profile

Can be useful for:

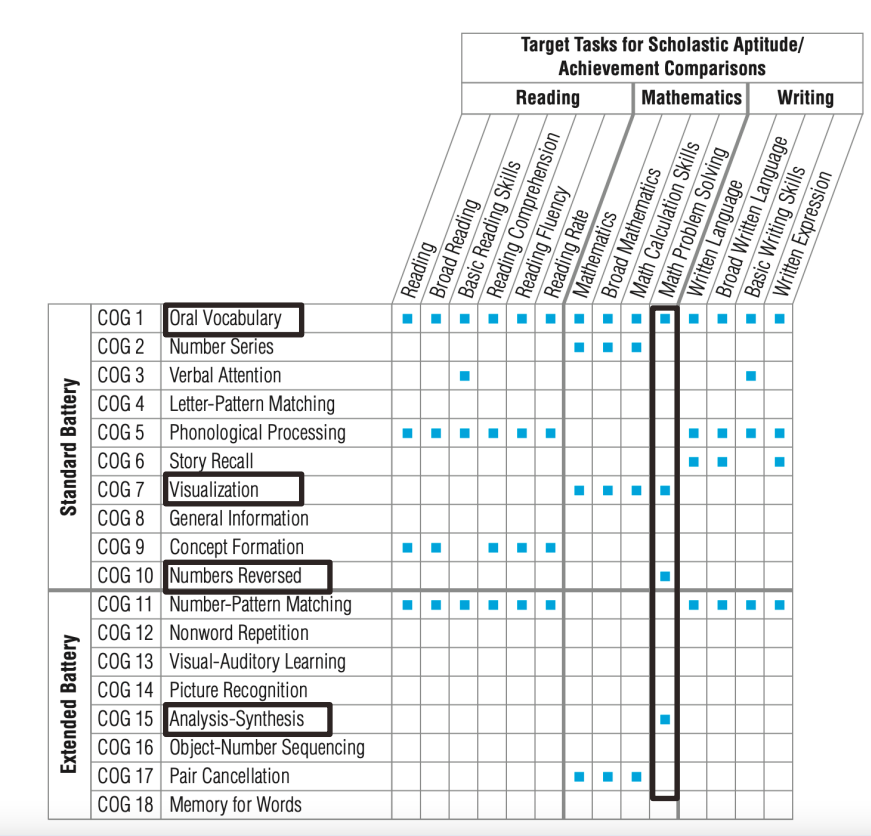
- Documenting relative strengths and weaknesses
- Program planning
- Understanding tasks the examinee will find easy and/or challenging

Interpreting Sarah's Intra-Cognitive Variations

VARIATIONS	STANDARD SCORES Actual	Predicted	Difference	DISCREPANCY PR	SD	Interpretation at + or - 1.50 SD (SEE)
Intra-Cognitive [Extended] Variations						
FLUID REASONING (Ext)	82	112	-30	0.1	-3.05	Weakness
COG PROCESS SPEED (*Gs*)	91	106	-15	13	-1.12	--
QUANTITATIVE REASONING	81	112	-31	0.2	-2.95	Weakness
Number Series	92	110	-18	6	-1.57	Weakness
Letter-Pattern Matching	115	105	10	76	+0.70	--
Concept Formation	88	110	-22	3	-1.85	Weakness
Analysis-Synthesis	76	111	-35	0.2	-2.91	Weakness
Pair Cancellation	71	105	-34	1	-2.48	Weakness

All data are fictional. Table only reflects WJ IV COG tasks of interest for ease of interpretation.

Scholastic Aptitude/Achievement



			Target Tasks for Scholastic Aptitude/ Achievement Comparisons													
			Reading						Mathematics				Writing			
			Reading	Broad Reading	Basic Reading Skills	Reading Comprehension	Reading Fluency	Reading Rate	Mathematics	Broad Mathematics	Math Calculation Skills	Math Problem Solving	Written Language	Broad Written Language	Basic Writing Skills	Written Expression
Standard Battery	COG 1	Oral Vocabulary	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	COG 2	Number Series							■	■	■					
	COG 3	Verbal Attention			■										■	
	COG 4	Letter-Pattern Matching														
	COG 5	Phonological Processing	■	■	■	■	■	■					■	■	■	■
	COG 6	Story Recall											■	■		■
	COG 7	Visualization							■	■	■	■				
	COG 8	General Information														
	COG 9	Concept Formation	■	■		■	■	■								
	COG 10	Numbers Reversed										■				
Extended Battery	COG 11	Number-Pattern Matching	■	■	■	■	■	■					■	■	■	■
	COG 12	Nonword Repetition														
	COG 13	Visual-Auditory Learning														
	COG 14	Picture Recognition														
	COG 15	Analysis-Synthesis										■				
	COG 16	Object-Number Sequencing														
	COG 17	Pair Cancellation							■	■	■					
	COG 18	Memory for Words														

- Used to predict ACH across reading, writing, and math
- Each Scholastic Aptitude Cluster is based on 4 WJ IV COG Tests offering the best prediction for the ACH area of interest
- Offers clinical utility in the investigation of *unexpected* or *expected* ACH.

Interpreting Sarah's Scholastic Aptitude/ACH Comparisons

COMPARISONS	STANDARD SCORES Actual	SAPT	Predicted	Difference	DISCREPANCY PR	SD	Significant at + or - 1.50 SD (SEE)
Scholastic Aptitude/Achievement Comparisons							
MATH PROBLEM SOLVING	84	104	103	-19	4	-1.73	Yes (-)

WJ IV COG Scholastic Aptitude Tests to Predict WJ IV ACH's Math Problem Solving Cluster

WJ IV COG Test 1: Oral Vocabulary
WJ IV COG Test 7: Visualization
WJ IV COG Test 10: Numbers Reversed
WJ IV COG Test 15: Analysis-Synthesis

All data are fictional. Table only reflects WJ IV tasks of interest for ease of interpretation.

Summary of Sarah's Data

WJ IV COG

Personal Weaknesses in: Gf, RQ, Number Series, Concept Formation, Analysis-Synthesis, & Pair Cancellation

WJ IV ACH

Personal Weaknesses in: Applied Problems & Math Facts Fluency

Aptitude/ACH

Inconsistency between Math Problem Solving Aptitude & actual ACH

Possible Math Problem-Solving Recommendations for Sarah Using the WIIIP™

01

Have Sarah keep a math journal and ask her to record the steps she follows to solve a problem. These written explanations can help identify areas of misunderstanding or gaps in understanding. Additionally, before introducing a new lesson, ask Sarah to write an explanation of one or two key skills needed for the lesson.

02

Allow Sarah to use visual representations of math problems to assist her in solving the problems. For example, use number lines, arrays, simple drawings, etc. to support Sarah's efforts to understand and solve the math problem. If necessary, provide Sarah with concrete manipulatives first to represent the problem. As Sarah progresses, teach her to translate the visual representation into a symbolic representation.

Additional Math Problem-Solving Recommendations for Sarah Using the WIIIP™

03 As a strategy, teach Sarah to draw a picture or a diagram of a mathematical word problem before trying to represent the problem with numbers.

04 Help Sarah to improve her problem-solving skills by using research-supported instructional practices. For example, use explicit instruction, verify that Sarah has the necessary foundation skills to solve the math problems, ensure that Sarah experiences an adequate rate of success, actively engage Sarah in the tasks, and provide frequent and timely feedback on her performance.

Possible Math Fluency Recommendations for Sarah Using the WIIIP™

01

Provide Sarah with a fact worksheet that cannot be completed in 1 minute. Allow Sarah to work for exactly 1 minute. Tally the number of correct responses and ask her to graph her performance. Then, review any errors with Sarah, and ask her to use a calculator to correct any errors.

02

To increase Sarah's speed and accuracy with math facts, use explicit timings. Create a math fact worksheet with 100 problems representing the operation to be practiced (addition, subtraction, multiplication, or division). Prior to beginning, explain that the purpose of the exercise is to improve Sarah's performance. Also explain that 1-minute timings will be conducted throughout the lesson. Begin by saying, “Pencil up, ready, begin.” After 1 minute, say, “Stop.” Ask Sarah to draw a line after the last problem she answered. Repeat this procedure throughout the class. Conduct at least 10 timings. Evaluate Sarah’s performance by using the number of correct problems during each 1-minute interval. Ask Sarah to graph this information to monitor progress. Do this activity with an entire class or individually.

Possible Fluid Reasoning Recommendations for Sarah Using the WIIIP™

01

Hands-on problem-solving tasks provide opportunities for Sarah to be actively engaged in learning. The teacher should demonstrate these tasks using a think-aloud procedure to model the steps involved in solving the problem. Cooperative learning groups and reciprocal teaching are effective ways to actively engage Sarah in learning and to develop his reasoning skills.

02

Introduce Sarah to deductive reasoning using concrete objects and engage her in the learning process. Provide repetition and review. Ask Sarah to verbalize what she has learned.

Possible Cognitive Processing Speed Recommendation for Sarah Using the WIIIP™

Sarah may benefit from activities that emphasize cognitive speediness. Activities may include repetitive practice, speed drills, and computer programs or games that require Sarah to rapidly process what she hears or sees. Select computer programs or games that provide Sarah with immediate feedback, and maintain a record of her performance over time.

Mini-Case Study #2

Jacob

Mini-Case Study #2
Jacob

CONFIDENTIAL

Any Private College

PARTIAL NEUROPSYCHOLOGICAL REPORT

Name: Jacob Senior
Birthdate: 05/01/2002
Age: 21
Grade: College (Senior)
Race & Ethnicity: Black/Hispanic
Primary Language (Home): English

School: Any Private College
Evaluator: Mr. Neuro
Current Placement: General Education
Dates of Assessment: *See Below*
Student Identification: 12345
Native Language: English

Brief Background

Self-referred for private neuropsych eval after suffering a TBI during a car accident

Currently sees a generalist & neurologist for ongoing medical care. He **does not** currently take medication

Reports challenges with following complex, multi-step directions, and recalling information from conversations

Seeking data to support his receipt of accessibility services at his college

WJ IV COG Test Selection Rationale

Neuropsychologist administers the following:

- Test 3: Verbal Attention (*Gwm*)
- Test 4: Letter-Pattern Matching (*Gs*)
- Test 6: Story Recall (*Glr*)
- Test 10: Numbers Reversed (*Gwm*)
- Test 13: Visual-Auditory Learning (*Glr*)
- Test 16: Object-Number Sequencing (*Gwm*)
- Test 17: Pair Cancellation (*Gs*)
- Also, administered Tests 1, 2, 5, and 7

Mather & Jaffe (2016)

Interpreting Jacob's Intra-Cognitive Variations

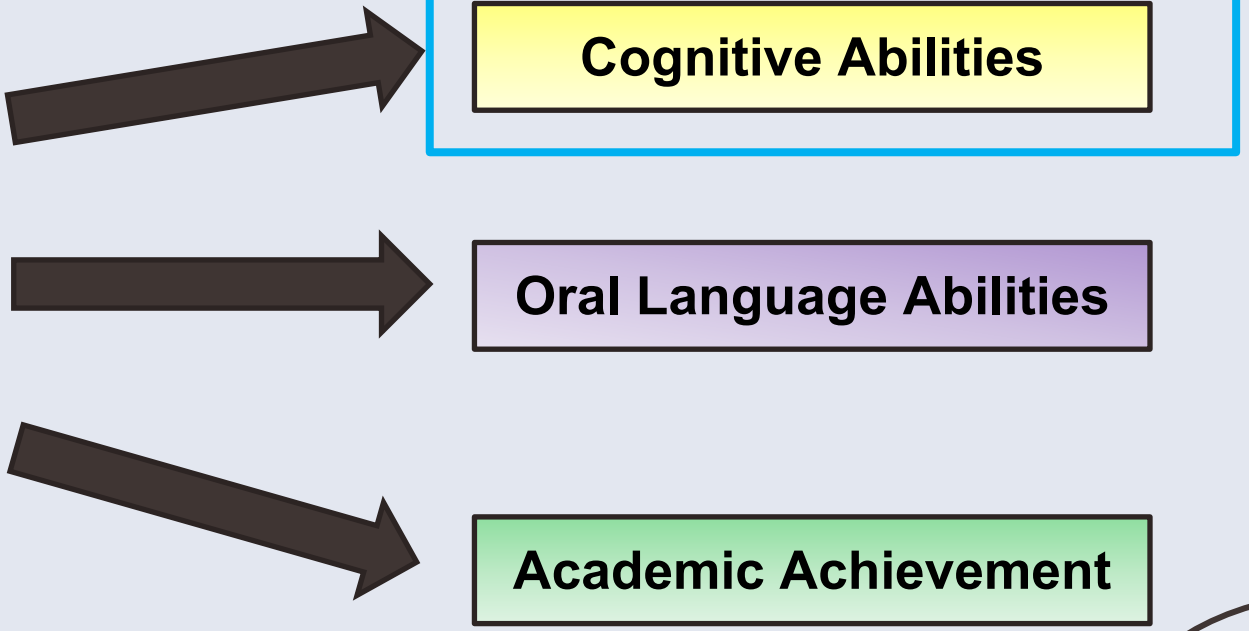
VARIATIONS	STANDARD SCORES Actual	Predicted	Difference	DISCREPANCY PR	SD	Interpretation at + or - 1.50 SD (SEE)
Intra-Cognitive Variations						
S-TERM WORK MEM (*Gwm*)	66	98	-32	0.3	-2.73	Weakness
COG PROCESS SPEED (*Gs*)	69	96	-27	2	-2.04	Weakness
L-TERM RETRIEVAL (*Glr*)	70	99	-29	1	-2.36	Weakness
Verbal Attention	74	98	-24	3	-1.95	Weakness
Letter-Pattern Matching	94	96	-2	43	-0.17	--
Story Recall	67	99	-32	1	-2.54	Weakness
Numbers Reversed	70	98	-28	1	-2.25	Weakness
Visual-Auditory Learning	82	99	-17	10	-1.26	--
Object-Number Sequencing	76	98	-22	4	-1.80	Weakness
Pair Cancellation	51	97	-46	<0.1	-3.35	Weakness

All data are fictional. Table only reflects WJ IV COG tasks of interest for ease of interpretation.

Gf-Gc/Other Ability

Gf-Gc Composite

WJ IV COG: Tests 1, 2, 8, & 9



Interpreting Jacob's *Gf-Gc*/Other Ability Comparisons

	STANDARD SCORES			DISCREPANCY		Interpretation at
COMPARISONS	Actual	Predicted	Difference	PR	SD	+ or - 1.50 SD (SEE)
Gf-Gc Composite/Other Ability Comparisons						
S-TERM WORK MEM (*Gwm*)	66	95	-29	1	-2.39	Weakness
COG PROCESS SPEED (*Gs*)	69	96	-27	2	-2.01	Weakness
L-TERM RETRIEVAL (*Glr*)	70	95	-25	2	-2.02	Weakness

All data are fictional. Table only reflects WJ IV COG tasks of interest for ease of interpretation.

Summary of Jacob's Data

Gwm

Personal Weaknesses in: Overall Cluster, Verbal Attention, Numbers Reversed, and Object-Number Sequencing

Glr

Personal Weaknesses in: Overall Cluster and Story Recall

Gs

Personal Weaknesses in: Overall Cluster, Verbal Attention, Numbers Reversed, and Pair Cancellation

Gf-Gc/Other Ability

Gwm, *Gs*, and *Glr* clinically & statistically significant weaknesses when compared to overall reasoning capabilities

Possible Short-Term Working Memory Recommendations for Jacob Using the WIIIP™

01

Accommodations may be useful in compensating for Jacob's limitations in working memory. Some examples include: keeping oral directions short and simple, asking Jacob to paraphrase directions to ensure that he understands them, and providing visual cues for directions or steps to be followed.

02

Check in with Jacob regularly and monitoring his work in the classroom to ensure he remembers what his goals for each task/lesson are.

Possible Short-Term Working Memory Recommendations for Jacob Using the WIIIP™

03 Rehearsal is an important factor in learning. Repeated and extensive practice may enable Jacob to perform some tasks in a more automatic fashion, lessening the demand on working memory.

04 Reduce Jacob's level of learning difficulty by restructuring complex tasks into separate, independent steps.

05 Teach Jacob to use organizational strategies, such as breaking down tasks in component parts, and to ask for help when he has forgotten important information.

Possible Long-Term Retrieval Recommendations for Jacob Using the WIIIP™

01

Overlearning improves storage and recall. Overlearning occurs when Jacob continues to review and rehearse information he already knows. Even one additional review can increase recall significantly.

02

Active learning (or attending to and thinking about the material) is important for Jacob to acquire new knowledge or to benefit from any memory strategies. He may have better recall when he is actively involved in the learning process.

03

Elaboration is a method to improve Jacob's encoding ability which, in turn, facilitates later recall. When presenting new information, it is important to associate the key points to Jacob's prior knowledge or personal experiences. When rehearsal is combined with elaboration, it is more likely that the information will be successfully encoded, stored, and available for recall. Elaborative rehearsal goes beyond simple recitation of information by focusing on meaning and association of the new information with other knowledge. As Jacob interacts with the material by thinking about it, associating it with prior knowledge, or reflecting on it, deeper processing of the information occurs.

Possible Long-Term Retrieval Recommendations for Jacob Using the WIIIP™

04 Jacob may be better able to recall information that he is required to know if he has been provided multiple opportunities to review and rehearse.

05 Visual representation is a means of improving the long-term retrieval process. For example, have Jacob create illustrations of or visualize the content being reviewed. Help Jacob think in pictures to improve the learning and recall of information.

Possible Cognitive Processing Speed Recommendations for Jacob Using the WIIIP™

03

Repetition is an important factor in building speed. Repeated and extensive practice may enable Jacob to perform some tasks in a more automatic fashion to increase performance speed. Activities can be teacher directed or student directed. Related computer programs or games can provide opportunities to practice responding quickly. Select computer programs or games that provide Sarah with immediate feedback and maintain a record of his performance over time.

04

Speed drills focus performance on completing a task quickly. When Jacob's performance on familiar tasks is timed and his progress monitored, his speed may increase…Allowing Jacob to chart his progress can provide additional motivation. Speed drills can be teacher- or student-directed, or they may make use of technology such as computerized programs or tachistoscopes. Select computer programs or games that provide Jacob with immediate feedback and maintain a record of his performance over time.

Mini-Case Study #3

Janine

Mini-Case Study #3
Janine

CONFIDENTIAL

Any Private Practice

ABBREVIATED SPEECH-LANGUAGE REPORT

Name: Janine Jansport
Birthdate: 05/01/2014
Age: 9
Grade: 4th
Race & Ethnicity: White/Hispanic
Primary Language (Home): English

School: Any Elementary
Evaluator(s): Mr. Speech
Current Placement: General Education
Dates of Assessment: *See Below*
Student Identification: 12345
Native Language: English

Brief Background

Tested as part of a private abbreviated speech-language evaluation to supplement recent academic testing

Referred by parents due to foundational literacy skill development given her low performance on in-class and homework tasks related to basic reading skills, reading fluency, and spelling.

Low performance persists despite engaging with a reading specialist one-on-one (2x weekly) and in a small group (2x weekly)

WJ IV OL Test Selection Rationale

Speech-Language Pathologist administers:

- Test 3: Segmentation
- Test 4: Rapid Picture Naming
- Test 5: Sentence Repetition
- Test 7: Sound Blending
- Test 8: Retrieval Fluency
- Test 9: Sound Awareness
- Also, administered Tests 1 and 2.

Proctor et al. (2015)

Intra-Oral Language Variation Procedures

WJ IV OL

Requires At Minimum: Tests 1-4

Analyze variability within an examinee's oral language profile

Can be useful for:

- Instructional planning
- Identifying relative strengths and weaknesses
- Forming diagnostic and clinical impressions

Interpreting Janine's Intra-OL Variations

VARIATIONS	STANDARD SCORES Actual	Predicted	Difference	DISCREPANCY PR	SD	Interpretation at + or - 1.50 SD (SEE)
Intra-Oral Language Variations						
PHONETIC CODING	52	85	-33	1	-2.34	Weakness
SPEED of LEXICAL ACCESS	42	89	-47	<0.1	-3.52	Weakness
Segmentation	56	87	-31	1	-2.18	Weakness
Rapid Picture Naming	<40	91		<0.1	-4.31	Weakness
Sentence Repetition	67	72	-5	35	-0.39	--
Sound Blending	64	87	-23	5	-1.62	Weakness
Retrieval Fluency	88	90	-2	44	-0.16	--

All data are fictional. Table only reflects WJ IV OL tasks of interest for ease of interpretation.

Summary of Janine's WJ IV OL Data

Phonetic Coding

Personal & Normative Weaknesses in: Overall Cluster, Segmentation, & Sound Blending

Speed of Lexical Access

Personal & Normative Weaknesses in: Overall Cluster and Rapid Picture Naming

Other Normative Weaknesses

Sentence Repetition

Possible Segmentation Recommendations for Janine Using the WIIIP™

01

Use the following sequence to teach Janine segmentation. Begin with tasks that require Janine to break apart compound words (e.g., raincoat). Then progress to syllables. Have Janine clap the number of words or use markers to represent each word part. When Janine has learned to break words into syllables, teach her how to segment short words into onsets and rimes (the first part of a syllable and the ending part of a syllable) and then into individual phonemes.

02

Represent sounds with concrete objects, such as blocks, tiles, or felt squares. Teach Janine to add, delete, substitute, and rearrange sounds using manipulatives, such as blocks or poker chips. After Janine can correctly manipulate sounds with these types of objects, transition to using letters or letter tiles to represent the sounds.

Possible Sound Blending Recommendation for Janine Using the WIIIP™

01

Provide Janine with direct instruction in sound blending using the following steps:

1. Have Janine say the word.

2. Present the word using prolonged sounds, but with no break between the sounds, and ask Janine to say the word.

3. Present the sounds with a short break between them and ask Janine to say the word.

4. Present the word with a quarter-second, then a half-second, then a 1-second break between the sounds and ask Janine to say the word after each presentation.

Possible Recommendations for Janine Based on Performance on Sentence Repetition Using the WIIIP™

01

When presenting new information, it may be important to associate the key points to Janine's prior knowledge or personal experiences. This may enable her to make meaningful connections, facilitating learning and memory.

02

Opportunities to hear and use language may help Janine develop expressive language abilities. Model language for Janine; this is a key to her language development. Describe actions, label objects, and engage Janine in conversations. Ask Janine questions to help her expand her ideas. If Janine makes semantic or syntactic errors when speaking, respond to Janine's intended message and model the correct language rather than identifying the errors. For example, repeat target words or phrases that Janine expresses and place them into a correct sentence structure.

Possible Recommendations for Janine Based on Speed of Lexical Access Using the *Woodcock-Johnson IV: Reports, Recommendations, and Strategies* Text (Mather & Jaffe, 2016)

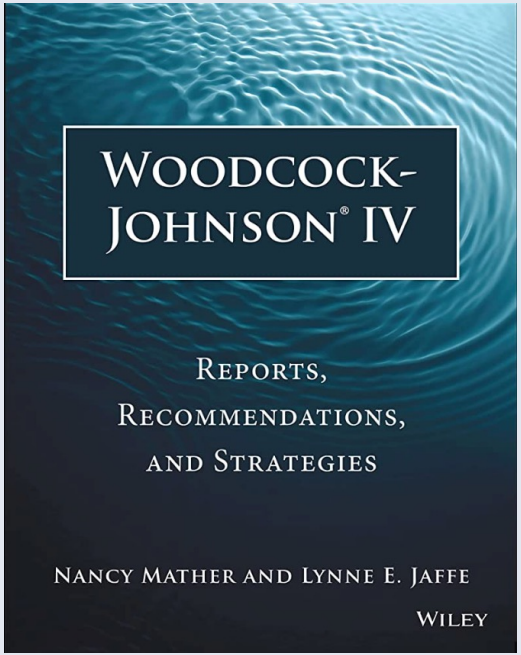
01

Teach Janine to recognize when she is having difficulty retrieving a word so that she may use a retrieval strategy:

- Teach Janine to visualize the object or the spelling of the word to prompt recall of the verbal label.
- Teach Janine to think of a category for the target word and mentally list associated objects to try and prompt recall. For example, if Janine is trying to retrieve the word dog, she could think of animal, pet, etc..
- Teach Janine to visualize a different context for the word and mentally describe it with a sentence. Example: For toys, Janine would think, "Children play with…"
- To facilitate word retrieval, encourage Janine to try to recall and say the first sound of the word.
- If Janine cannot recall a word, encourage her to use a synonym.
- Alternatively, you may provide a prompt to help Janine retrieve the word
- Provide a prompt in which the meaning will trigger the word. For example, if she cannot retrieve the word “Office” you could say, “People work in their…?” and see if she can finish the sentence.
- Say the first phoneme or syllable of the word she is trying to find.

Mather & Jaffe (2016)

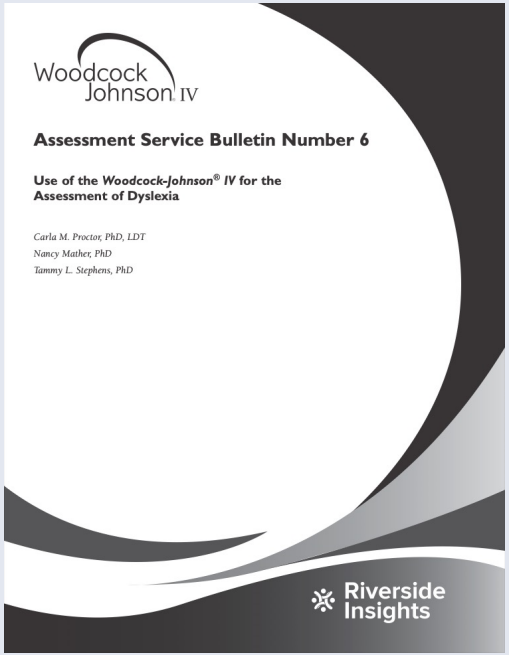
Noted Resources:



WIIIP™

Increase the impact of your evaluations.

The ***WJ IV Interpretation and Instructional Interventions Program***™ **(WIIIP®)** personalizes interventions and accommodations based on WJ IV and ECAD results.



Join Us For a WIIIP Webinar on May 3rd, 2023

Working Smarter, Not Harder: Using the WIIIP to Assist with Report Writing (Part 3)

Overview of Session that will be conducted by Dr. Tammy Stephens

The WIIIP program is a comprehensive tool that includes resources evaluators can utilize at each stage of the evaluation process. This 3rd in a series of webinars will focus on the role the WIIIP features can play in tying assessment data (formal and informal) together for instructional programming. Participants will be presented with a case study using the WIIIP program.

Contact

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