Understanding and Utilization of the XBASS Software (including the C-LIM)

CASP Convention 2023
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About Me

I have over ten years of experience as a bilingual school psychologist. I received my Masters and Education Specialist degree in School Psychology at the University of the Pacific. I am a Licensed Educational Psychologist, as well as a Nationally Certified School Psychologist. I currently works for a large district in the Bay Area.

I also serve as the president of the Bay Area Association of School Psychologist, participate on the CASP Board and part of the Bilingual Round Table of Northern California.

I utilize a therapy dog in my practice.

His name is Ziggs.

Learning Objectives

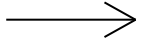
- Interpret and present cross-battery assessment findings efficiently and accurately
- Target analysis to answer specific questions for SLD evaluations
- Analyze empirical cognitive/academic relationships beyond relative magnitude of test scores
- Customize referral-relevant batteries by selecting from the X-BASS database of hundreds of cognitive, achievement, neuropsychological, and speech-language subtests

Disclaimer

- No affiliation or compensation from Wiley or any of the authors

Cattell–Horn–Carroll Theory

The Cattell-Horn-Carroll (CHC) model of cognitive abilities is the empirically based, valid and measurable construct for the analysis of learning abilities. The Cattell-Horn-Carroll (CHC) Theory classifies cognitive skills within seven clusters of abilities that demonstrate moderate to highly significant correlations to academic achievement skills. The seven CHC areas are defined:



Crystalized knowledge (Gc)*
Fluid Reasoning (Gf)
Short-term memory (Gsm)
Long-term memory (Glr)
Cognitive Processing Speed (Gs)
Auditory Processing (Ga)
Visual Process (Gv)

Cattell–Horn–Carroll Theory

Gc. Comprehension-Knowledge*

The breadth and depth of knowledge including verbal communication and information.

Gf. Fluid Reasoning

The ability to reason and solve problems that often involve unfamiliar information or procedures. Fluid reasoning abilities are manifested in the reorganization, transformation, and extrapolation of information.

Gsm. Short-Term Memory

The ability to hold information in immediate awareness and then use it within a few seconds, also related to working memory.

Glr. Long-Term Retrieval

The ability to store information efficiently and retrieve it later through association.

Cattell–Horn–Carroll Theory

Gs. Processing Speed

The speed and efficiency in performing automatic or very simple cognitive tasks.

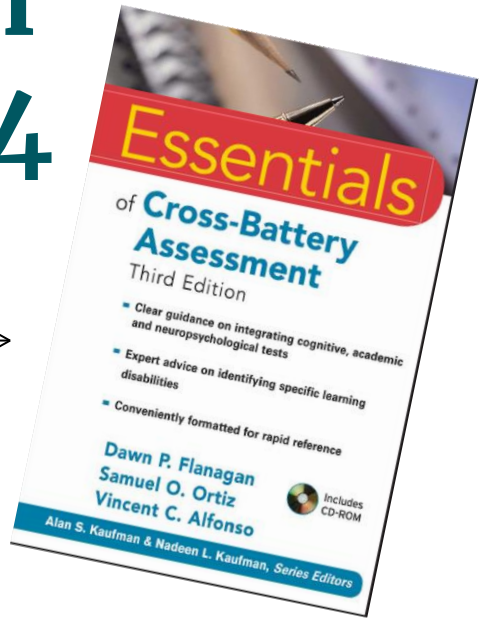
Gv. Visual-Spatial Thinking

Spatial orientation, the ability to analyze and synthesize visual stimuli, and the ability to hold and manipulate mental images.

Ga. Auditory Processing

The ability to discriminate, analyze, and synthesize auditory stimuli. Auditory processing skills are related to phonological awareness.

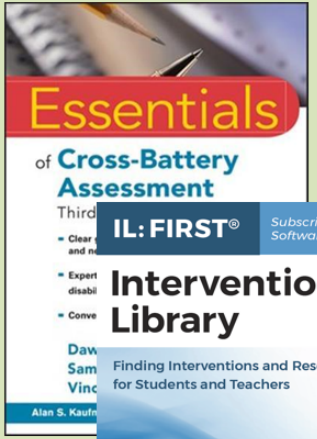
Cross- Battery Assessment Software System (X-BASS) ® v2.4

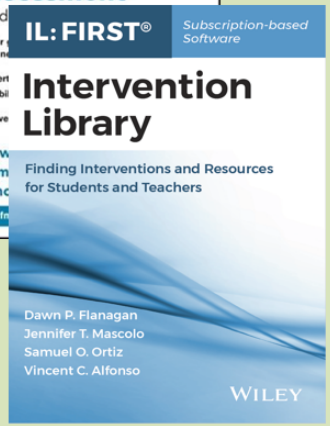


Cross-Battery Assessment Software System (X-BASS® v2.4)

Release: 2.4

Conceptualization by D.P. Flanagan, S.O. Ortiz, V.C. Alfonso; Programming by S.O. Ortiz and A.M. Dynda





Essentials of Cross-Battery Assessment, 3rd Edition remains the reference document necessary for understanding Cross-Battery Assessment (XBA) and the principles upon which the X-BASS is based.

***NEW:** We are proud to announce the release of an independent, companion program to X-BASS called "Intervention Library: Finding Interventions and Resources for Students and Teachers (IL:FIRST v1.0)." IL:FIRST is a stand alone program designed to assist practitioners in being able to find, evaluate, and explore a variety of interventions that can be tailored to specific cognitive and academic strengths and weaknesses commonly found in students with learning difficulties as may be informed via use of X-BASS. For more information, go to Wiley.com and search for "Intervention Library."*

Click here to find out more about new features in X-BASS. **What's New**

New Users:

If you are new to XBA or X-BASS, click the "Start Here" button and follow the prompts for step-by-step guidance. This option is strongly recommended for first time and inexperienced users of X-BASS. New users should also read and review the User Guide for basic info.

Start Here **Guide** **Help**

Experienced Users:

Experienced users can just set the User Mode and navigate directly to one of the main tabs from here.

User Mode
- Beginner
- Intermediate
- Advanced

Start **Index**

PSW-Quick Analysis:

If you have a set of scores for which you would like to conduct a quick PSW analysis for SLD evlauation, click here for guidance on using the PSW-QA.

PSW-QA

Welcome | Authors | Guide | Help | Start | Index | Test List | Test List-QR | XBA Analyzer Guide | XBA | XBA Graph | Integrated Graph | PSW Quick Analysis - Data

Ready | Accessibility: Investigate | 100%

Guide

Start/Data Record Management

Release: 2.4

Index

Tab Help

Next Step

WISC-V | WAIS-IV | WPPSI-IV | WIAT-4 | WIAT-III | WJ IV COG | WJ IV ACH | WJ IV OL | KABC-II | KTEA-3 | CAS2 | DAS-II | SB5

To SET or change user mode for X-BASS, use the buttons to the right. Beginner Mode displays additional guidance and assistance in using the program. Intermediate mode displays typical informational and confirmational messages. Advanced mode suppresses all except critical messages.

User Mode: ○ Beginner ○ Intermediate ◉ Advanced

QUICK START: 1. ENTER NAME (if new case) 2. ENTER DATES/GRADE 3. CREATE NEW DATA RECORD

*Name of Examinee:	Ziggs	*Date of Evaluation:	10/4/2022	Use mm/dd/yyyy if an error occurs, try yyyy/mm/dd.	Create New Record
Name of Evaluator:		*Date of Birth:	2/9/2012		Check box if examinee is an English learner (EL) ☑
Examinee's Age:	10 years 7 month(s)	*Examinee's Grade:	4	PK,K,1-12,12+	
*required		*required			NO ACTIVE DATA RECORD

To OPEN and activate a saved record from the database, select it from the dropdown menu on the right. Data records are listed in alphabetical order by first name. Once selected, all data associated with the record will be populated in the appropriate locations. Click the Index button at the upper right corner of this tab to begin reviewing and updating the saved data. The program can store and retrieve data for up to 500 cases.

OPEN SAVED DATA RECORD

To SAVE or update the current data record, click the blue "Save Current Record" button and continue working. Frequent saves are recommended.

Save Current Record

To RUN a PSW Quick Analysis click the yellow button and enter the scores and grade level. There is no need to create a case record to conduct PSW-QA.

PSW Quick Analysis

To EXPORT and save the current database (for importation to a newer version of X-BASS), click the "Export Current Database" button. This action creates a file that can be used by updated versions of X-BASS to automatically transfer and merge the current database for use with the new version.

Export Current Database

To IMPORT a saved database (for use in a newer version of X-BASS), click the "Import Saved Database" button. Note that you must have already exported the previous database using the older version of X-BASS. Once the older database has been properly saved, use this button to import it.

Import Saved Database

Determine Difference

Name:	Ziggs	**Grade:**	4	**Date:**	10/4/2022
Evaluator:		**Age:**	10 years 7 month(s)	**DOB:**	2/9/2012

WISC-V | WAIS-IV | WPPSI-IV | WIAT-4 | WIAT-III | WJ IV COG | WJ IV ACH | WJ IV OL | KABC-II | KTEA-3 | CAS2 | DAS-II | SB5

STEP 1. DETERMINE DIFFERENCE: Difference?

Proper evaluation of test scores requires a determination regarding the degree of "difference" the examinee exhibits relative to the degree of acculturative learning and developmental language proficiency in English compared to the test's normative sample. The notion of "difference" addresses how comparable the examinee's experiences and background are relative to other individuals of the same age or grade. Less comparability means more difference. A good starting point for making a determination involves assessment of the individual's developmental language proficiency relative to native English speakers. After making the determination, indicate the degree by using the appropriate button below. The difference may be changed as desired on any tab.

INDICATE DEGREE OF DIFFERENCE HERE: *Compared to typical native English speaker and considering the amount of Englis exposure compared to other ELs, this student's background is best described as:*

○ Slightly Different ◉ Moderately Different ○ Markedly Different

Determine Difference

SLIGHTLY DIFFERENT

Language proficiency in terms of speaking English is at the advanced to proficient (fluent) level, and English may have long been the primary language. However, knowledge of and familiarity with the native/heritage language is still evident, relatively good language models in English are available in the home, individual no longer needs or never received ESL/ESOL services, has been attending school for about five to seven years with all instruction in English only, is likely third generation or later (was born in U.S. and parents also born in the U.S.), family appears highly acculturated but elements of the heritage culture are still present, and family or developmental history contains no unusual circumstances or significant experiences affecting development or education. Overall, most experiences are similar to mainstream population but subtle cultural and linguistic differences remain.

MODERATELY DIFFERENT *(This is the default level used in the program and the most likely degree of difference for most evaluations)*

Language proficiency in terms of speaking English is at the intermediate to advanced level and knowledge and use of the native/heritage language is clearly evident, language models in English are not readily available in the home, individual is either close to no longer needing or has recently stopped receiving ESL/ESOL services, has been attending school for at least three years with most instruction in English only or primarily in English, is likely second generation (but first to be born in the U.S), family is not highly acculturated to mainstream and significant elements of the heritage culture are present, family is not acculturated much to the mainstream and nearly all elements of the heritage culture are present. Family or developmental history may contain an unusual circumstance or experience affecting development or education (e.g., recent immigration, significantly impoverished environment, upbringing, and economic status, an interruption in language development, etc.). Overall, few experiences are similar to mainstream population and many significant and obvious cultural and linguistic differences remain.

MARKEDLY DIFFERENT

Language proficiency in terms of speaking English is beginner to intermediate level and use of the native/heritage language is prominent and often primary, no language models in English are available at home, individual is receiving or has recently begun to receive ESL/ESOL services, has been attending school outside the U.S. but it has been intermittent or interrupted or of poor quality and consistency, attendance in school in the U.S. for less than three years with most instruction in English only or primarily in English, is possibly first or second generation (not born in U.S., came to U.S. at a very early age, or is first to be born in the U.S). Family or developmental history may contain one or more extremely unusual circumstances and experiences (e.g., recent immigration, refugee status, significantly impoverished environment, upbringing, and economic status, limited communicative experiences with adults, repeated or significant interruptions in language development, etc.). Overall, no experiences are similar to mainstream population and all significant and obvious cultural and linguistic differences remain present and prominent.

WISC-V | WAIS-IV | WPPSI-IV | WIAT-4 | WIAT-III | WJ IV COG | WJ IV ACH | WJ IV OL | KABC-II | KTEA-3 | CAS2 | DAS-II | SB5

Transfer Scores | Clear Unused Tests | Populate C-LIM by selecting battery/test name here --- WISC-V | C-LTC Reference | Clear ALL Data

Interpretive Guide | Subtest Variability?

Culture-Language Interpretive Matrix - Analyzer and Data Entry

C-LIM Level Graph | C-LIM Main Graph

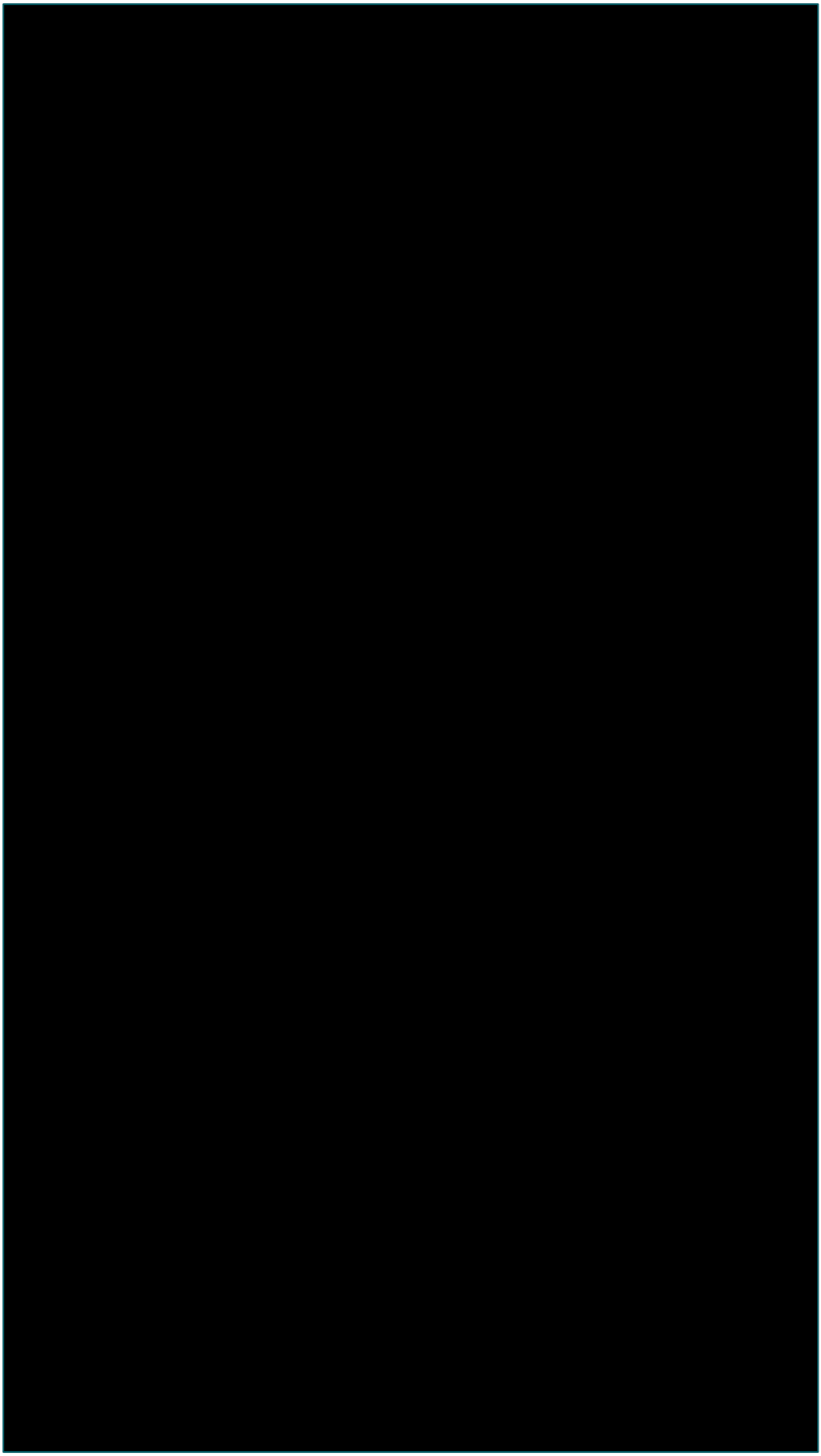
Name: *Ziggs* Age: *10 years 7 month(s)* Grade: *4* Date: *10/4/2022*

DEGREE OF LINGUISTIC DEMAND

DEGREE OF CULTURAL LOADING

	LOW			MODERATE			HIGH		
LOW	CELL 1: LowC/LowL	Score		CELL 2: LowC/ModL	Score		CELL 3: LowC/HighL	Score	
	WISC-V Cancellation			WISC-V Block Design			WISC-V Digit Span		
	WISC-V Cancellation Random			WISC-V Block Design No Time Bonus			WISC-V Digit Span Forward		
	WISC-V Cancellation Structured			WISC-V Block Design Partial Score			WISC-V Digit Span Sequencing		
	WISC-V Matrix Reasoning			WISC-V Coding			WISC-V Letter-Number Sequencing		
	WISC-V Visual Puzzles			WISC-V Delayed Symbol Translation					
				WISC-V Digit Span Backward					
				WISC-V Immediate Symbol Translation					
				WISC-V Picture Span					
				WISC-V Recognition Symbol Translation					
				WISC-V Symbol Search					
	Cell Average =			Cell Average =			Cell Average =		
MODERATE	CELL 4: ModC/LowL	Score		CELL 5: ModC/ModL	Score		CELL 6: ModC/HighL	Score	
	WISC-V Picture Concepts			WISC-V Arithmetic			WISC-V Comprehension		
				WISC-V Figure Weights			WISC-V Naming Speed Quantity		
				WISC-V Naming Speed Letter-Number					
	Cell Average =			Cell Average =			Cell Average =		
HIGH	CELL 7: HighC/LowL	Score		CELL 8: HighC/ModL	Score		CELL 9: HighC/HighL	Score	
				WISC-V Naming Speed Color-Object			WISC-V Information		
				WISC-V Naming Speed Literacy			WISC-V Naming Speed Size-Color-Object		
							WISC-V Similarities		
							WISC-V Vocabulary		

https://youtu.be/b40OLlRzh-8



Language-Only Graph | Culture-Only Graph | Save Current Record | Print C-LIM Matrix

For other T-Scores (*not DAS-II, RIAS-2, or WNV) use the SS Converter: <--T-Score here = Standard Score here--> <-- Use/enter this score in the matrix.

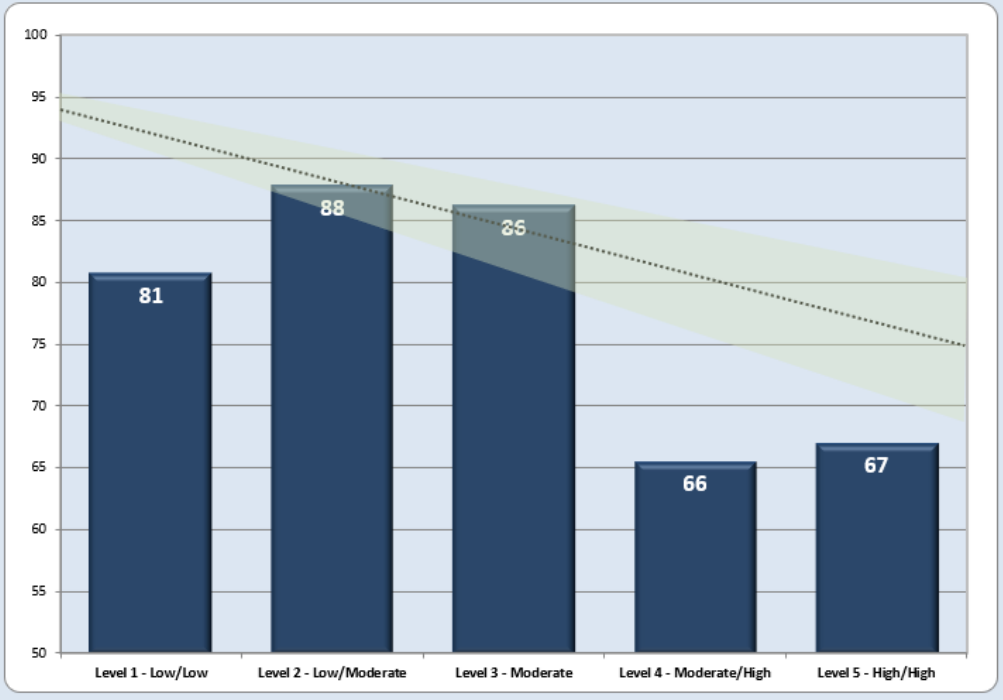
*DAS-II, RIAS-2, and WNV subtest T-scores may be entered directly without conversion.

Name: Ziggs Age: 10 years 7 month(s) Grade: 4 Date: 10/4/2022

Interpretive Guide | Cell Variability? | DEGREE OF DIFFERENCE FOR EVALUATION: ○ Slightly Different ◉ Moderately Different ○ Markedly Different | C-LIM Main Graph | C-LIM Matrix

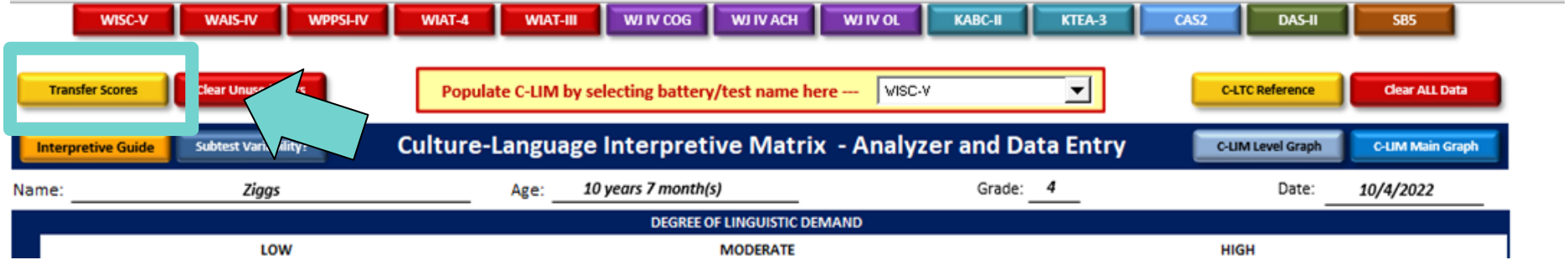
C-LIM Summary Graph for all Test Score Data: Level Analysis

☐ Use Gifted Scale

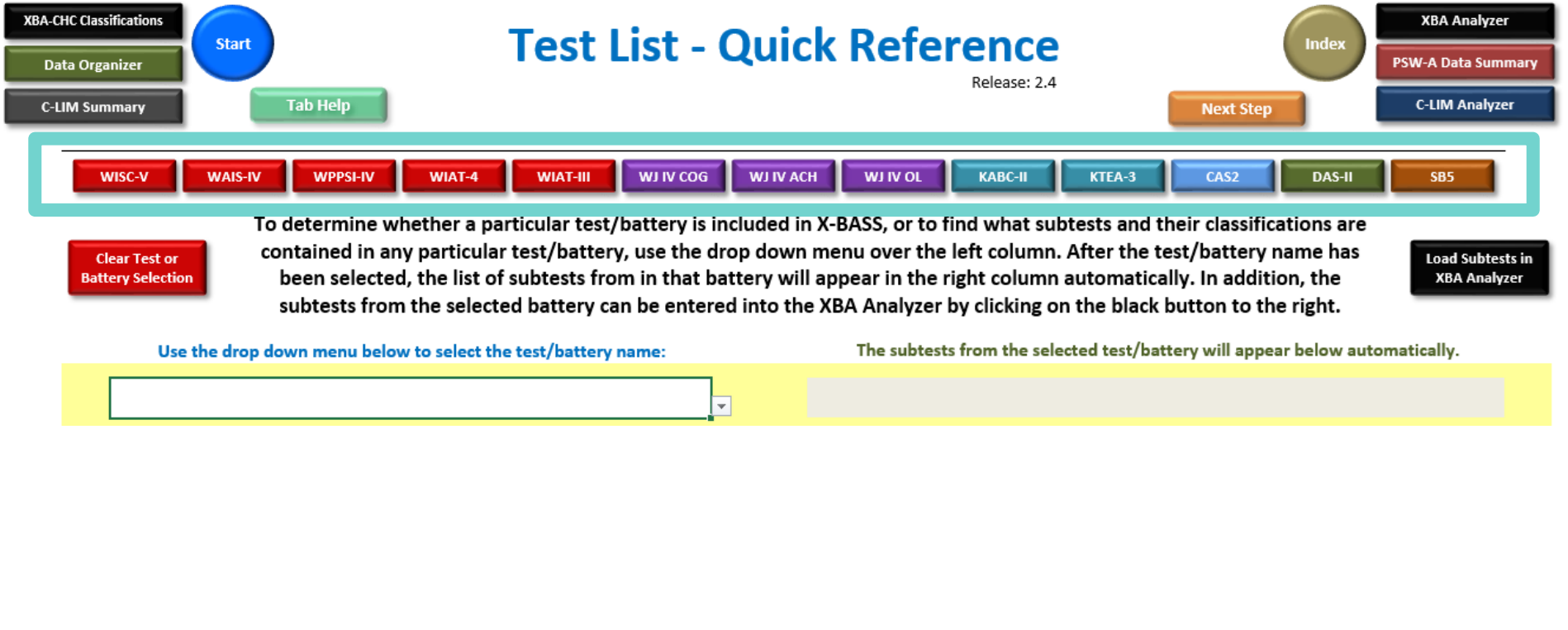


Language-Only Graph | Culture-Only Graph | Save Current Record | Print Level Graph

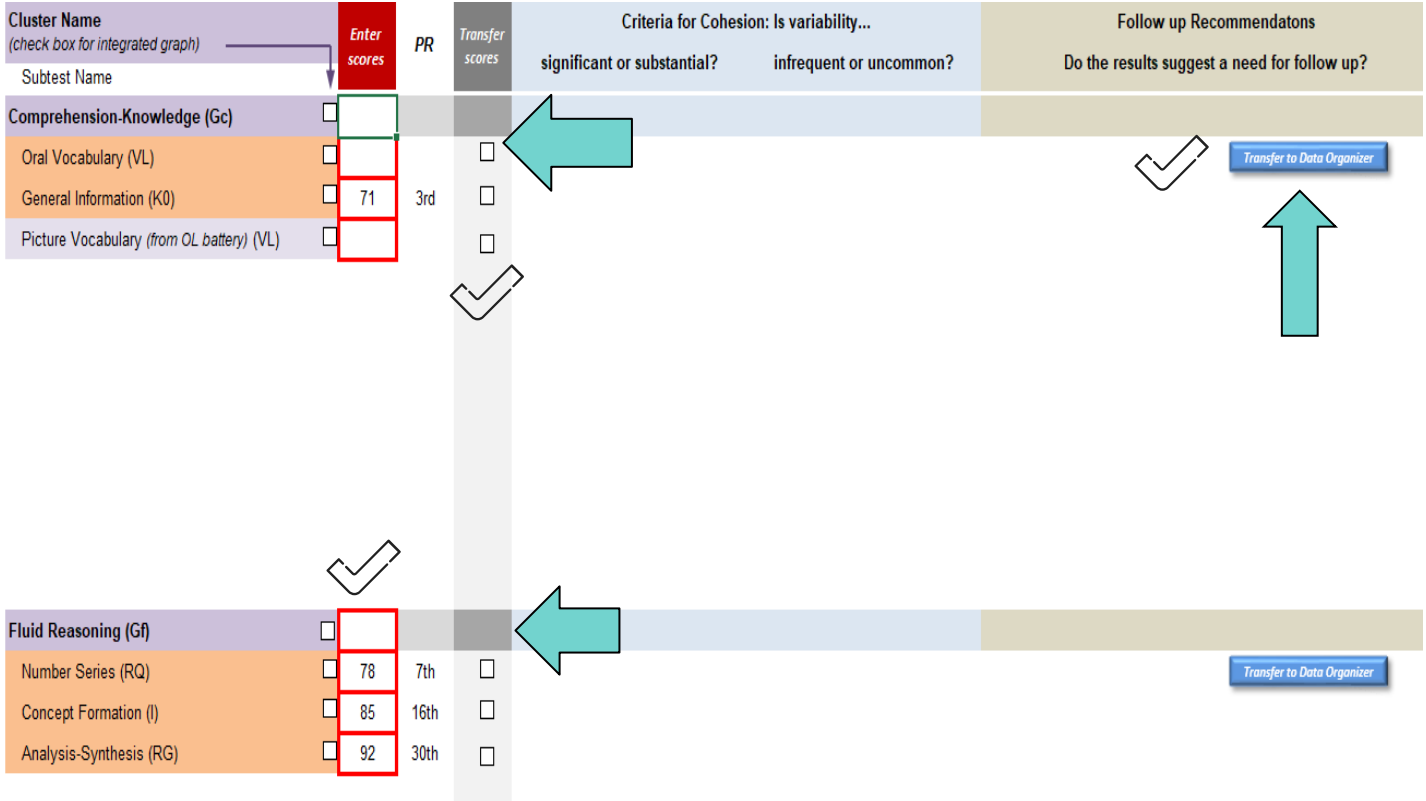
REMEMBER!


WISC-V
WAIS-IV
WPPSI-IV
WIAT-4
WIAT-III
WJ IV COG
WJ IV ACH
WJ IV OL
KABC-II
KTEA-3
CAS2
DAS-II
SB5
Transfer Scores
Populate C-LIM by selecting battery/test name here ---
WISC-V
C-LTC Reference
Clear ALL Data
Interpretive Guide
Culture-Language Interpretive Matrix - Analyzer and Data Entry
C-LIM Level Graph
C-LIM Main Graph
Name: Ziggs
Age: 10 years 7 month(s)
Grade: 4
Date: 10/4/2022
DEGREE OF LINGUISTIC DEMAND
LOW
MODERATE
HIGH

Entering Scores



Enter Scores



Enter Scores

Name: *Ziggs* ***Grade:*** *4* ***Age:*** *10 years 7 month(s)* ***Date:*** *10/4/2022*

WISC-V | WAIS-IV | WPPSI-IV | WIAT-4 | WIAT-III | WJ IV COG | WJ IV ACH | WJ IV OL | KABC-II | KTEA-3 | CAS2 | DAS-II | SB5

Cluster Name (check box for integrated graph) / Subtest Name		Enter scores	PR	Transfer scores
Comprehension-Knowledge (Gc)	☐	60	0.4th	
Oral Vocabulary (VL)	☐	57	0.2nd	☐
General Information (K0)	☐	71	3rd	☐
Picture Vocabulary *(from OL battery)* (VL)	☐			☐

Criteria for Cohesion: Is variability...

significant or substantial?	infrequent or uncommon?
No	**No**

COHESIVE

The WJ IV COG Comprehension-Knowledge (Gc) is primarily a measure of Comprehension and Knowledge. Gc refers to an individual's knowledge base (or general fund of information) that develops as a result of exposure to language, culture, general life experiences, and formal schooling. The difference between the scores that comprise the WJ IV COG Comprehension-Knowledge (Gc) is not statistically significant and a difference of this size occurs in at least 10% of the general population which means the difference is relatively common. This means that the WJ IV COG Comprehension-Knowledge (Gc) is a good psychometric summary of Comprehension and Knowledge. Additionally, information regarding where the subtest scores fall relative to each other and relative to most people is unlikely to add clinically relevant information above and beyond the WJ IV COG Comprehension-Knowledge (Gc), although clinical judgement is always necessary when making this determination. The individual's score on the WJ IV COG Comprehension-Knowledge (Gc) of 60 (55 - 65) is classified as Lower Extreme/Normative Weakness and is ranked at the 0.4th percentile, indicating performance as good as or better than 0.4% of same age peers from the general population.

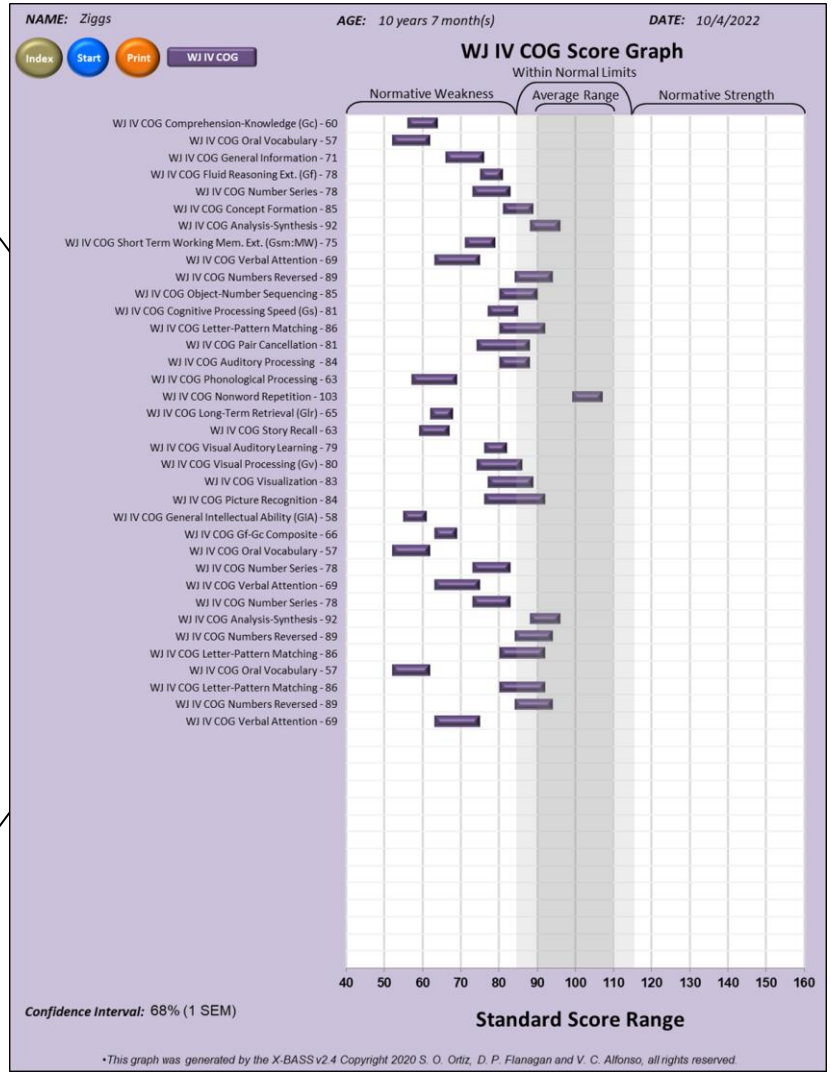
Follow up Recommendatons

Do the results suggest a need for follow up?

Maybe for lowest score

Gc = 60 Transfer to Data Organizer

Although both scores that comprise the composite are indicative of a deficit, the difference between them is considered subst tial (i.e., at least 2/3 SD). Therefore, to gain a better understanding of th dual's performance in this ability domain, it may be helpful to follow the lower score and consider the differences that specific task dema and characteristics may have had on performance.



WJ IV COG Graph

Here you can give view normative weaknesses, within normal limits, or normative strengths scores.

Enter Academic Scores

Name: Ziggs **Grade:** 4 **Age:** 10 years 7 month(s) **Date:** 10/4/2022

WISC-V | WAIS-IV | WPPSI-IV | WIAT-4 | WIAT-III | WJ IV COG | WJ IV ACH | WJ IV OL | KABC-II | KTEA-3 | CAS2 | DAS-II | SB5

Cluster Name (check box for integrated graph) / Subtest Name		Enter scores	PR	Transfer scores
Broad Reading*	☐	74	4th	
Letter-Word Identification (BRS)	☐	75	5th	☑
Passage Comprehension (RDC)	☐	72	3rd	☑
Sentence Reading Fluency (RDF)	☐	80	9th	☑
Basic Reading Skills (Grw-R)	☐	69	2nd	
Letter-Word Identification (BRS)	☐	75	5th	☑
Word Attack (BRS;Ga:PC)	☐	62	1st	☐

*Because this composite is comprised of subtests that measure two or more different reading subdomains, it may be difficult to interpret and therefore it is not recommended for transfer to the Data Organizer.

Criteria for Cohesion: Is variability...

significant or substantial?	infrequent or uncommon?
Not Applicable	Data not available
Yes	No

Data are not available to evaluate this composite for cohesion when three subtest scores are entered. You may, however, delete the optional score and evaluate it as a two-subtest composite.

CLINICAL JUDGMENT NEEDED

Although the difference between the scores that comprise the composite is significant, a difference of this size occurs in at least 10% of the general population which makes it relatively common. Therefore, clinical judgment is needed to determine whether the composite is cohesive and if it can be interpreted as an adequate summary of the theoretically related abilities it was intended to represent.

Follow up Recommendatons

Do the results suggest a need for follow up?

*This composite spans 2 or more reading subdomains

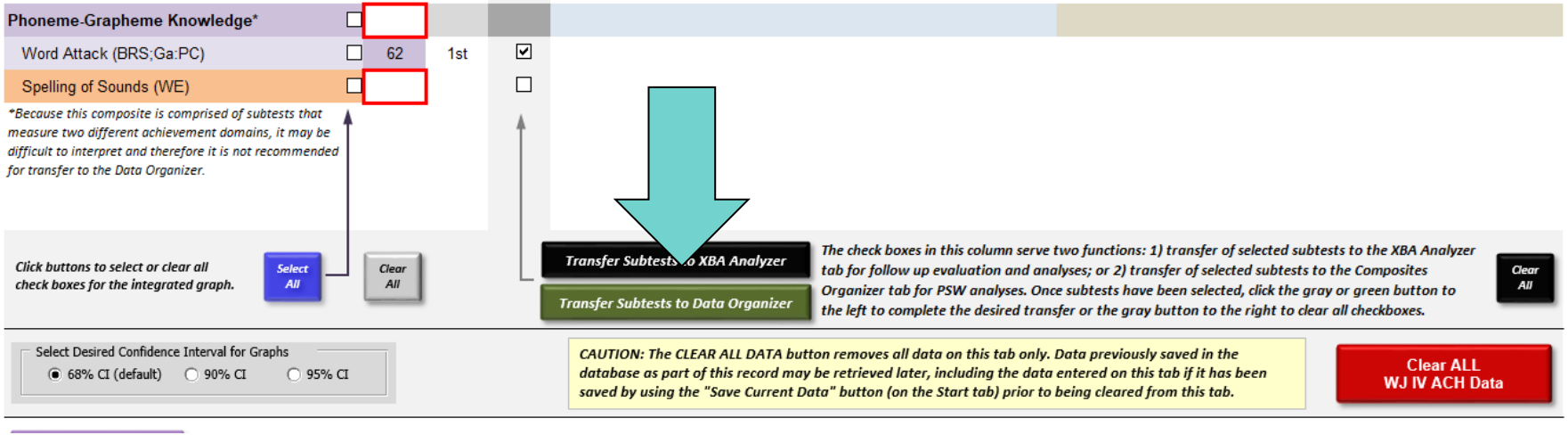
This composite cannot be evaluated for follow up because it spans two or more different achievement domains. However, the subtests may be transferred to the XBA Analyzer where they can be combined with other subtests from the same domain to evaluate possible formation of XBA academic composites.

Maybe for lowest score

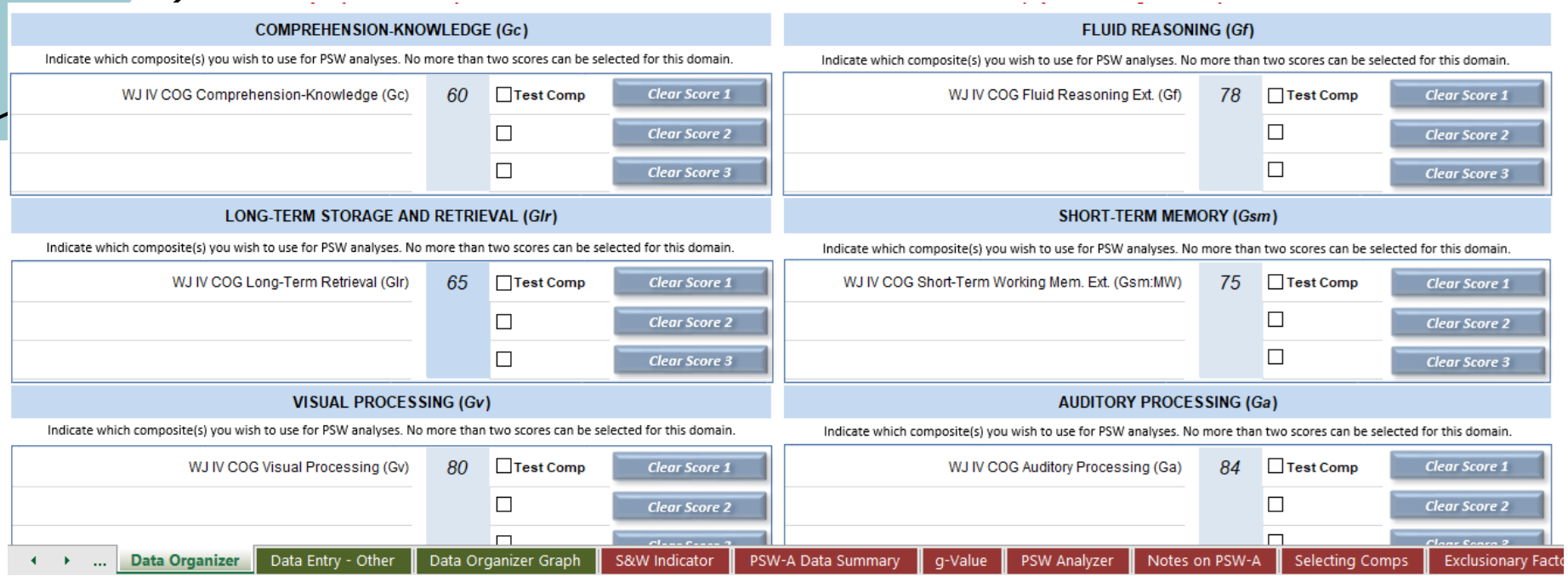
BRS = 69 Transfer to Data Organizer

Although both scores that comprise the composite are indicative of a deficit, the difference between them is considered substantial (i.e., at least 2/3 SD). Therefore, to gain a better understanding of the individual's performance in this ability domain, it may be helpful to follow up on the lower score and consider the differences that specific task demands and characteristics may have had on performance.

Enter Academic Scores



Identifying Strengths and Weaknesses



COMPREHENSION-KNOWLEDGE (*Gc*)

Indicate which composite(s) you wish to use for PSW analyses. No more than two scores can be selected for this domain.

WJ IV COG Comprehension-Knowledge (Gc)	60	Test Comp	Clear Score 1
			Clear Score 2
			Clear Score 3

FLUID REASONING (*Gf*)

Indicate which composite(s) you wish to use for PSW analyses. No more than two scores can be selected for this domain.

WJ IV COG Fluid Reasoning Ext. (Gf)	78	Test Comp	Clear Score 1
			Clear Score 2
			Clear Score 3

LONG-TERM STORAGE AND RETRIEVAL (*Glr*)

Indicate which composite(s) you wish to use for PSW analyses. No more than two scores can be selected for this domain.

WJ IV COG Long-Term Retrieval (Glr)	65	Test Comp	Clear Score 1
			Clear Score 2
			Clear Score 3

SHORT-TERM MEMORY (*Gsm*)

Indicate which composite(s) you wish to use for PSW analyses. No more than two scores can be selected for this domain.

WJ IV COG Short-Term Working Mem. Ext. (Gsm:MW)	75	Test Comp	Clear Score 1
			Clear Score 2
			Clear Score 3

VISUAL PROCESSING (*Gv*)

Indicate which composite(s) you wish to use for PSW analyses. No more than two scores can be selected for this domain.

WJ IV COG Visual Processing (Gv)	80	Test Comp	Clear Score 1
			Clear Score 2

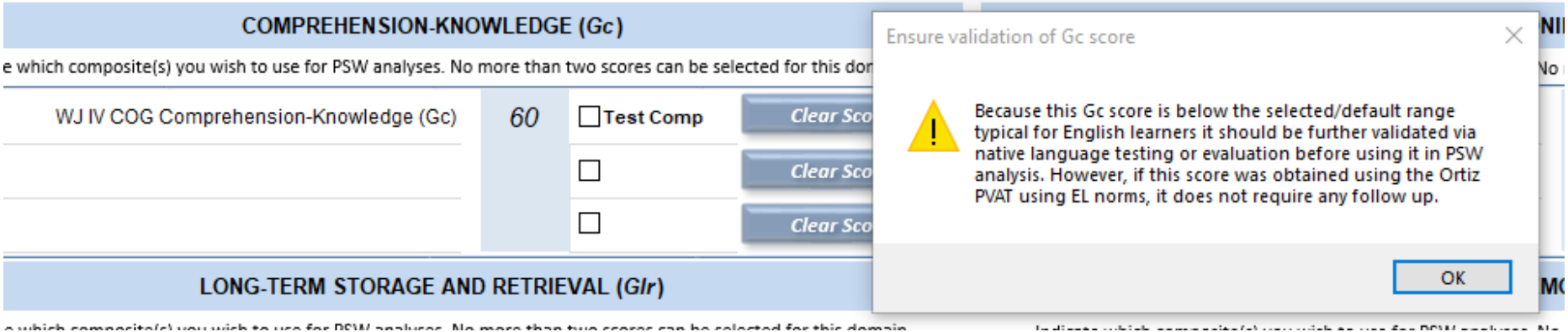
AUDITORY PROCESSING (*Ga*)

Indicate which composite(s) you wish to use for PSW analyses. No more than two scores can be selected for this domain.

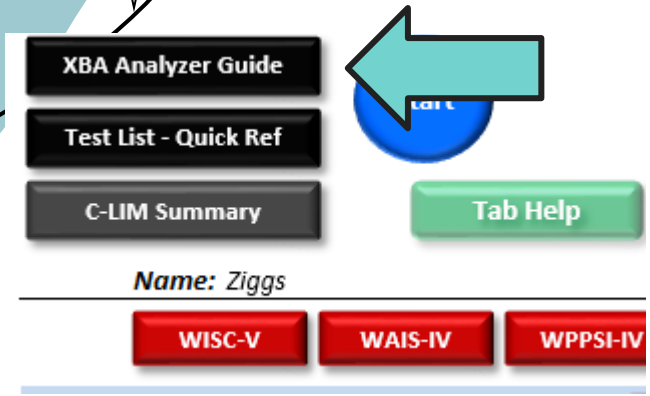
WJ IV COG Auditory Processing (Ga)	84	Test Comp	Clear Score 1
			Clear Score 2

... Data Organizer | Data Entry - Other | Data Organizer Graph | S&W Indicator | PSW-A Data Summary | g-Value | PSW Analyzer | Notes on PSW-A | Selecting Comps | Exclusionary Facto

Notice!

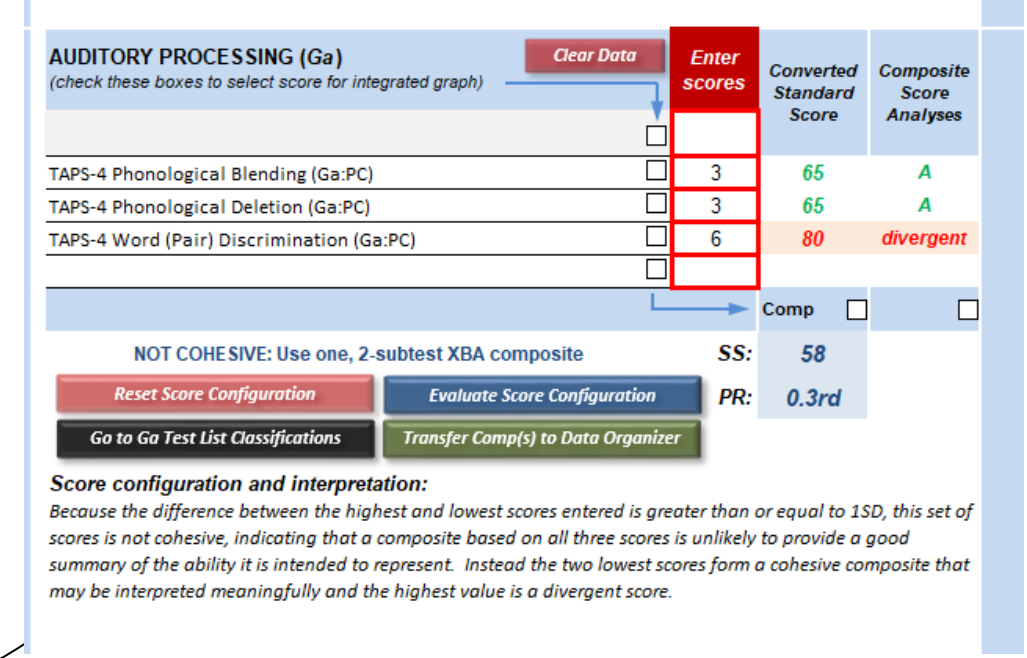

COMPREHENSION-KNOWLEDGE (Gc)
e which composite(s) you wish to use for PSW analyses. No more than two scores can be selected for this dor
WJ IV COG Comprehension-Knowledge (Gc)
60
Test Comp
Clear Sco
Clear Sco
Clear Sco
LONG-TERM STORAGE AND RETRIEVAL (Glr)
Ensure validation of Gc score
Because this Gc score is below the selected/default range typical for English learners it should be further validated via native language testing or evaluation before using it in PSW analysis. However, if this score was obtained using the Ortiz PVAT using EL norms, it does not require any follow up.
OK

Follow Up Testing



For additional testing, you can enter data in the XBA Analyzer Guide. This button is found at the top of every page.

Follow Up Testing



AUDITORY PROCESSING (Ga) (check these boxes to select score for integrated graph)	Clear Data	Enter scores	Converted Standard Score	Composite Score Analyses
	☐			
TAPS-4 Phonological Blending (Ga:PC)	☐	3	65	A
TAPS-4 Phonological Deletion (Ga:PC)	☐	3	65	A
TAPS-4 Word (Pair) Discrimination (Ga:PC)	☐	6	80	divergent
	☐			
			Comp ☐	☐

NOT COHESIVE: Use one, 2-subtest XBA composite

SS: 58

PR: 0.3rd

Reset Score Configuration | Evaluate Score Configuration

Go to Ga Test List Classifications | Transfer Comp(s) to Data Organizer

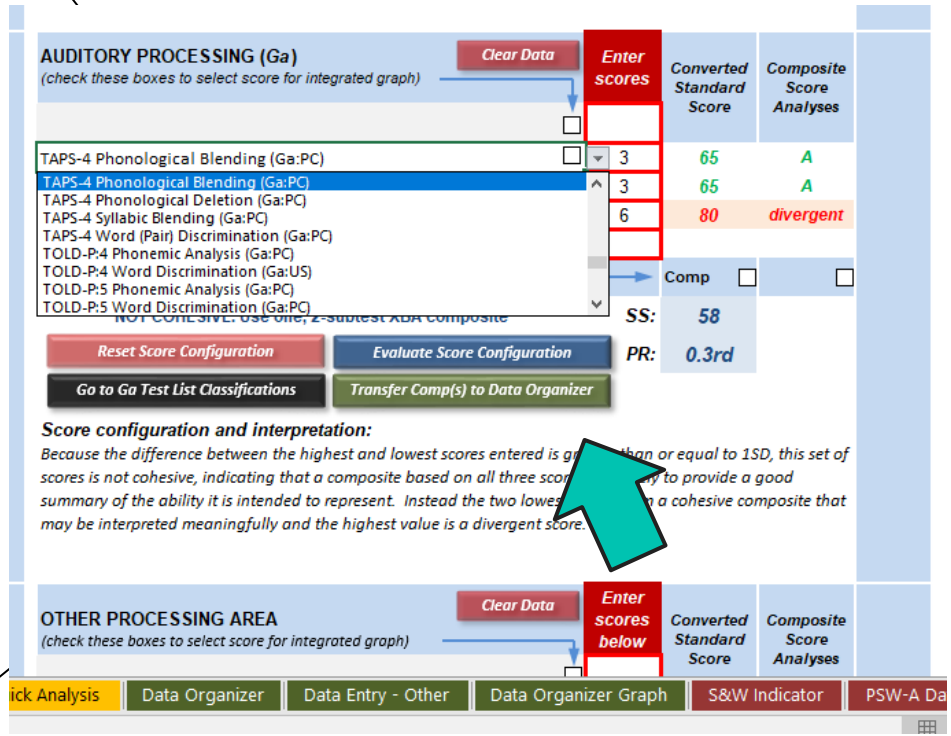
Score configuration and interpretation:

Because the difference between the highest and lowest scores entered is greater than or equal to 1SD, this set of scores is not cohesive, indicating that a composite based on all three scores is unlikely to provide a good summary of the ability it is intended to represent. Instead the two lowest scores form a cohesive composite that may be interpreted meaningfully and the highest value is a divergent score.

Auditory Processing

Because the scores were not cohesive on the WJ-IV Cog, follow up testing on the TAPS-4 was done.

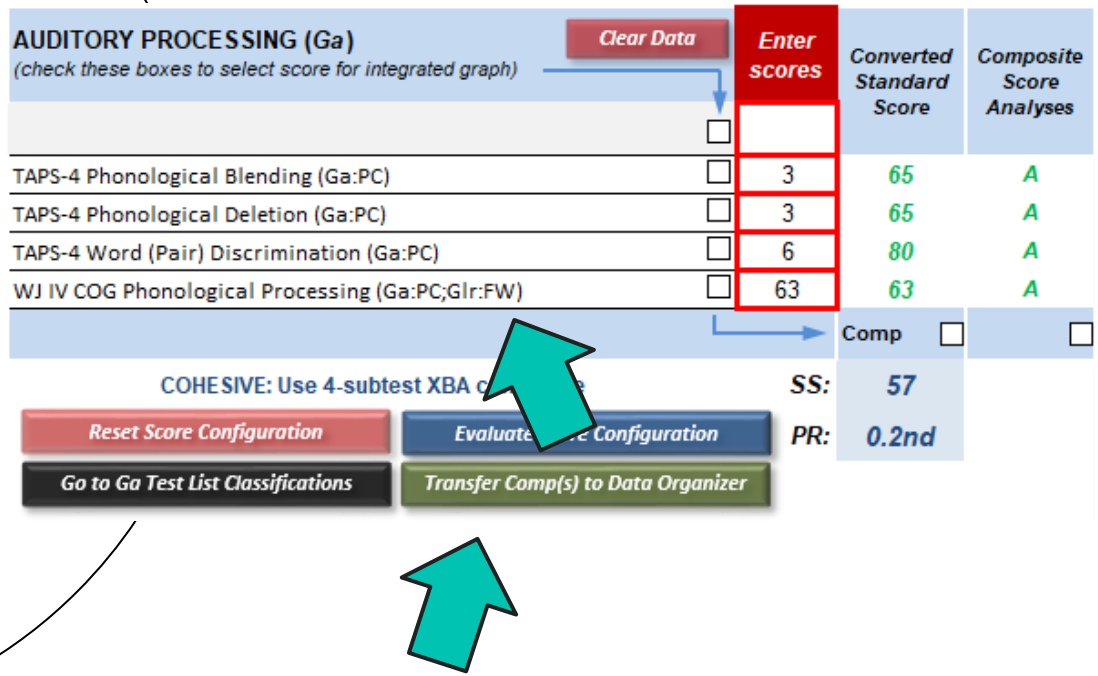
Follow Up Testing



Auditory Processing

Drop down menu is available. This can also give you ideas of what further testing you may need to do in that area.

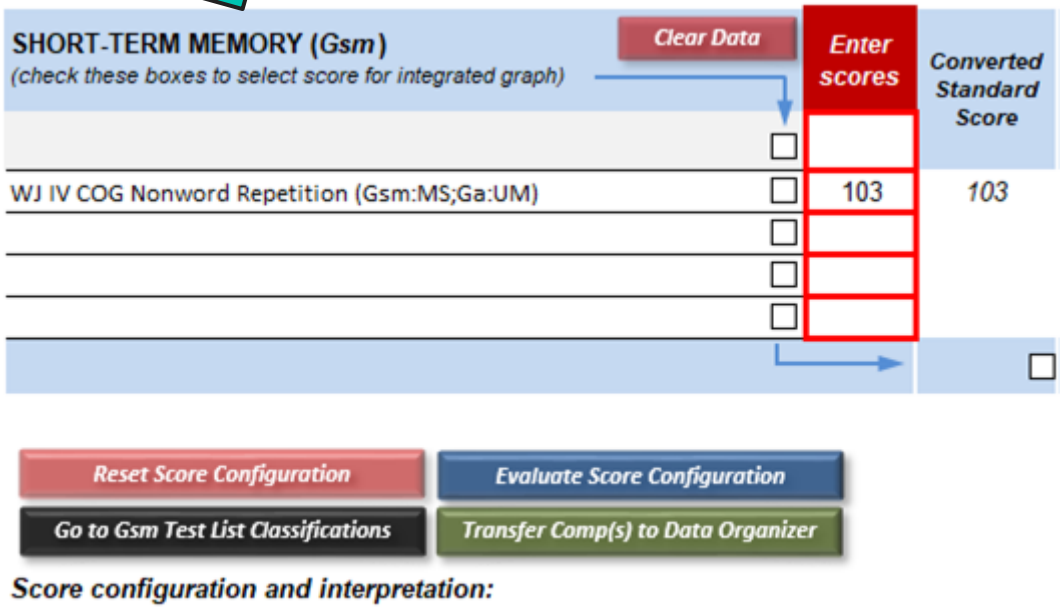
Follow Up Testing



Auditory Processing

If you go back and only check individual subtests in the WJ-IV Cog tab, you can transfer that individual score to the XBA, to determine if that subtest is cohesive with new subtests.

Follow Up Testing

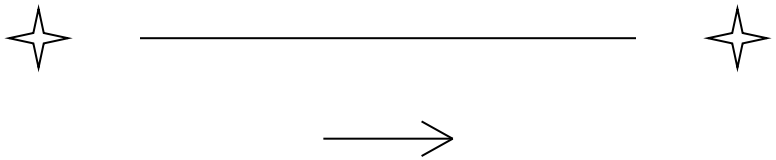


Auditory Processing

Notice that Nonword Repetition loads more in short term memory and not auditory processing.

Break

Questions?



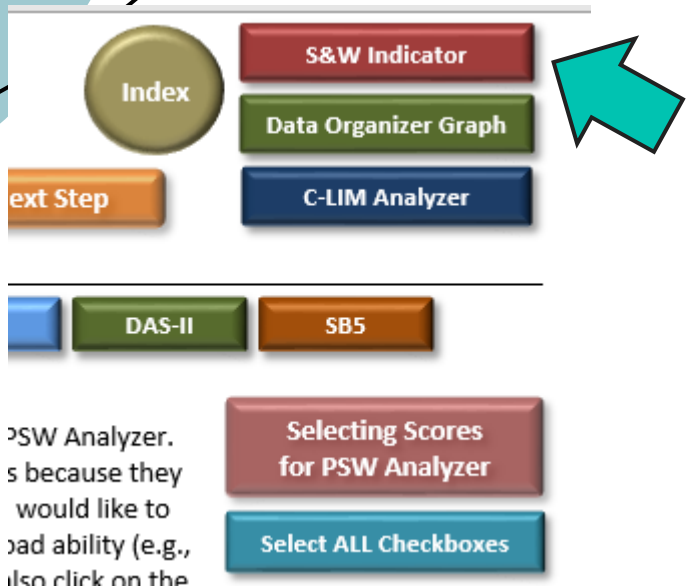
Strengths and Weaknesses

According to the XBASS program: Indicate whether the CHC domains (highlighted in blue) and neuropsychological domains (highlighted in beige) represent strengths or weaknesses for the individual. Determination of strengths and weaknesses is a judgment that is made by the evaluator based on what is known about the examinee. In general, ability and processing strengths facilitate learning and academic performance, whereas weaknesses inhibit learning and academic performance.

Typically, scores that ***fall in the average range or higher likely facilitate learning and scores that fall below average or lower likely inhibit learning***.

Also, indicate whether the academic areas (highlighted in purple) represent strengths or weaknesses for the individual. ***Achievement standard scores that are about 90 or higher are considered strengths and scores that fall below 90 are considered weaknesses.***

Identifying S & W



At the top of the page (or bottom of the page) you can move to identifying strengths and weaknesses.

Strengths and Weaknesses

PROCESSING SPEED (Gs)			
WJ IV COG Cognitive Processing Speed (Gs:P) Test Comp	81	○ strength	◉ weakness
		○ strength	○ weakness

OTHER PROCESSING AREA			
		○ strength	○ weakness
		○ strength	○ weakness

BASIC READING SKILLS (BRS)			
WJ IV ACH Basic Reading Skills (BRS) Test Comp	69	○ strength	◉ weakness
WJ IV ACH Letter-Word Identification (BRS;Grw-R:RD) Subtest	75	○ strength	◉ weakness
WJ IV ACH Word Attack (BRS;Grw-R:RD) Subtest	62	○ strength	◉ weakness

READING COMPREHENSION (RDC)			
WJ IV ACH Passage Comprehension (RDC;Grw-R:RC) Subtest	72	○ strength	◉ weakness
		○ strength	○ weakness
		○ strength	○ weakness

READING FLUENCY (RDF)			
WJ IV ACH Reading Fluency (RDF) Test Comp	77	○ strength	◉ weakness
		○ strength	○ weakness
		○ strength	○ weakness

WRITTEN EXPRESSION (WE)			
WJ IV ACH Broad Written Language (WE) Test Comp	71	○ strength	◉ weakness
WJ IV ACH Written Expression (WE) Test Comp	66	○ strength	◉ weakness
WJ IV ACH Spelling (WE;Grw-W:SG) Subtest	67	○ strength	◉ weakness

MATH CALCULATION (MC)			
WJ IV ACH Broad Mathematics (MC) Test Comp	76	○ strength	◉ weakness
WJ IV ACH Math Calculation Skills (MC) Test Comp	80	○ strength	◉ weakness
WJ IV ACH Calculation (MC;Gq:A3) Subtest	87	○ strength	◉ weakness

MATH PROBLEM SOLVING (MPS)			
WJ IV ACH Applied Problems (MPS;Gq:A3;Gf:RQ) Subtest	71	○ strength	◉ weakness
		○ strength	○ weakness
		○ strength	○ weakness

ORAL EXPRESSION (OE)			
		○ strength	○ weakness

LISTENING COMPREHENSION (LC)			
		○ strength	○ weakness

You can see here that the student does not have any strengths. You can determine relative strengths for your report, but that will have to be explained properly to parents and staff. They may have a relative strength in processing speed, but this is still considered below average compared to their peers.

Follow Up Testing

Name: *Ziggs* **Grade:** *4* **Date:** *10/4/2022* **Age:** *10 years 7 month(s)*

WISC-V | WAIS-IV | WPPSI-IV | WIAT-4 | WIAT-III | WJ IV COG | WJ IV ACH | WJ IV OL | KABC-II | KTEA-3 | CAS2 | DAS-II | SB5

Areas of strength below form the Facilitating Cognitive Composite (FCC)	CHC ABILITY DOMAINS	SCORE	Areas of weakness below form the Inhibiting Cognitive Composite (ICC).	
	WJ IV COG Comprehension-Knowledge (Gc) Test Comp	60	W	*Gc**
	WJ IV COG Fluid Reasoning Ext. (Gf) Test Comp	78	W	*Gf*
	WJ IV COG Long-Term Retrieval (Glr) Test Comp	65	W	*Glr*
	WJ IV COG Short-Term Working Mem. Ext. (Gsm:MW) Test Comp	75	W	*Gsm*
	WJ IV COG Visual Processing (Gv) Test Comp	80	W	*Gv*
	Auditory Processing (Ga) Comp	57	W	*Ga*
	WJ IV COG Cognitive Processing Speed (Gs:P) Test Comp	81	W	*Gs*

CHC Composites designated as strengths are used for computation of the g-Value and FCC (top oval in the DD/C model) and those designated as weaknesses are used for computation of the ICC (bottom left oval in the DD/C model). When a domain contains a strength and a weakness, the strength is used in calculation of the g-Value/FCC and the weakness is used in the calculation of the ICC.

1. g-Value:
The *g*-Value reflects overall cognitive ability based on the CHC abilities judged by the evaluator to be strengths. The *g*-Value is interpreted according to the *likelihood* that an individual possesses at least average overall cognitive ability.

0.0

2a. Facilitating Cognitive Composite (FCC)
Represents an individual's overall general ability (based on strengths) and is used to evaluate differences relative to a specific of pattern of cognitive and academic weaknesses.

0

2b. Alternative Cognitive Composite (ACC)
You may enter an alternative value if desired or when the FCC is not believed to be the best estimate of general ability .

3. Inhibiting Cognitive Composite (ICC)
Represents an aggregate of an individual's overall weaknesses and is used to evaluate consistency and the relationship between cognitive and academic weaknesses. If there is only one cognitive weakness, the ICC is not calculated.

60

ICC will be used for PSW analysis

Display Results Again

Click to re-display pop up message regarding results of the current PSW analysis or when data are changed.

User Mode
- ○ Beginner
- ○ Intermediate
- ◉ Advanced

- ○ Score difference will be considered rare/infrequent when it occurs 5% of the time (very strict value, best for multiple comparisons or tests with low reliability)
- ◉ Score difference will be considered rare/infrequent when it occurs 10% of the time (default value, best for standard analyses with composites and reliable tests)
- ○ Score difference will be considered rare/infrequent when it occurs 15% of the time (very liberal value, increases false positive rate--not recommended)

4. Rarity/Frequency of Difference - FCC/ACC to Cognitive Weakness
Select base rate level for determining if the size of a difference occurs rarely or infrequently. The default value is 10%. A more conservative or liberal value may be selected. If multiple comparisons are made, a stricter value may be appropriate.

Follow Up Testing

Name: *Ziggs* **Grade:** *4* **Date:** *10/4/2022* **Age:** *10 years 7 month(s)*

WISC-V | WAIS-IV | WPPSI-IV | WIAT-4 | WIAT-III | WJ IV COG | WJ IV ACH | WJ IV OL | KABC-II | KTEA-3 | CAS2 | DAS-II | SB5

Areas of strength below form the Facilitating Cognitive Composite (FCC)		CHC ABILITY DOMAINS	SCORE	Areas of weakness below form the Inhibiting Cognitive Composite (ICC).	
		WJ IV COG Comprehension-Knowledge (Gc) Test Comp	60	W	*Gc**
		WJ IV COG Fluid Reasoning Ext. (Gf) Test Comp	78	W	*Gf*
		WJ IV COG Long-Term Retrieval (Glr) Test Comp	65	W	*Glr*
		WJ IV COG Short-Term Working Mem. Ext. (Gsm:MW) Test Comp	75	W	*Gsm*
Gv	S	WJ IV COG Visual Processing (Gv) Test Comp	80		
		Auditory Processing (Ga) Comp	57	W	*Ga*
Gs	S	WJ IV COG Cognitive Processing Speed (Gs:P) Test Comp	81		

CHC Composites designated as strengths are used for computation of the g-Value and FCC (top oval in the DD/C model) and those designated as weaknesses are used for computation of the ICC (bottom left oval in the DD/C model). When a domain contains a strength and a weakness, the strength is used in calculation of the g-Value/FCC and the weakness is used in the calculation of the ICC.

1. g-Value:
The *g*-Value reflects overall cognitive ability based on the CHC abilities judged by the evaluator to be strengths. The *g*-Value is interpreted according to the *likelihood* that an individual possesses at least average overall cognitive ability.

0.10

2a. Facilitating Cognitive Composite (FCC)
Represents an individual's overall general ability (based on strengths) and is used to evaluate differences relative to a specific of pattern of cognitive and academic weaknesses.

77

2b. Alternative Cognitive Composite (ACC)
You may enter an alternative value if desired or when the FCC is not believed to be the best estimate of general ability .

3. Inhibiting Cognitive Composite (ICC)
Represents an aggregate of an individual's overall weaknesses and is used to evaluate consistency and the relationship between cognitive and academic weaknesses. If there is only one cognitive weakness, the ICC is not calculated.

58

ICC will be used for PSW analysis

Display Results Again

Click to re-display pop up message regarding results of the current PSW analysis or when data are changed.

User Mode
- ○ Beginner
- ○ Intermediate
- ◉ Advanced

- ○ Score difference will be considered rare/infrequent when it occurs 5% of the time (very strict value, best for multiple comparisons or tests with low reliability)
- ◉ Score difference will be considered rare/infrequent when it occurs 10% of the time (default value, best for standard analyses with composites and reliable tests)
- ○ Score difference will be considered rare/infrequent when it occurs 15% of the time (very liberal value, increases false positive rate--not recommended)

4. Rarity/Frequency of Difference - FCC/ACC to Cognitive Weakness
Select base rate level for determining if the size of a difference occurs rarely or infrequently. The default value is 10%. A more conservative or liberal value may be selected. If multiple comparisons are made, a stricter value may be appropriate.

g-Value and FCC

g-Value

The *g*-Value reflects overall cognitive ability based on the CHC abilities judged by the evaluator to be strengths. The *g*-Value is interpreted according to the *likelihood* that an individual possesses at least average

The individual using the following scale:

< .50 = average overall ability is unlikely; .

51 - .59 = more information needed;

> .60 = average overall ability is very likely

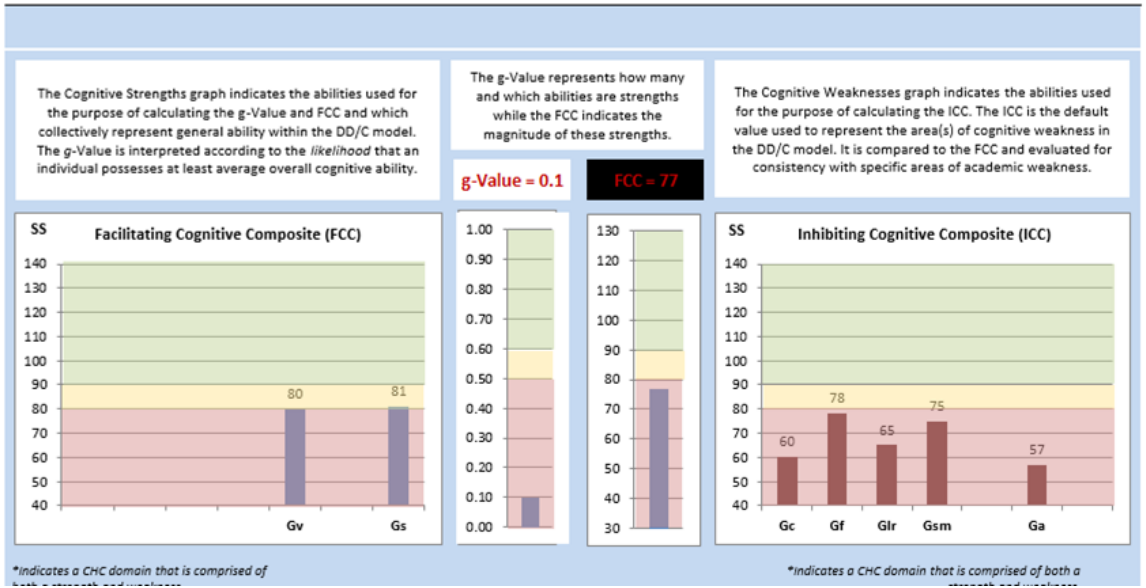
Facilitating Cognitive Composite (FCC)

FCC Represents an individual's overall general ability (based on strengths) and is used to evaluate differences relative to a specific of pattern of cognitive and academic weaknesses.

The g-Value represents how many and which abilities are strengths while the FCC indicates the magnitude of these strengths.

≤ .50 = average overall ability is unlikely; .51 - .59 = more information needed; ≥ .60 = average overall ability is very likely

g-Value and FCC

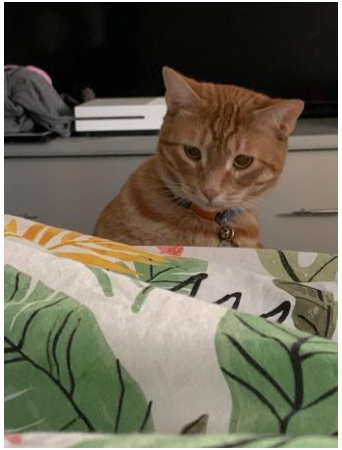


Based on data entered in prior tabs, a g - Value is computed and displayed here. Users are advised to refer to the PSW-A Notes tab in X-BASS and to the relevant text in Essentials of Cross-Battery Assessment, Third Edition for a detailed discussion regarding the full meaning and proper use and interpretation of the g - Value.

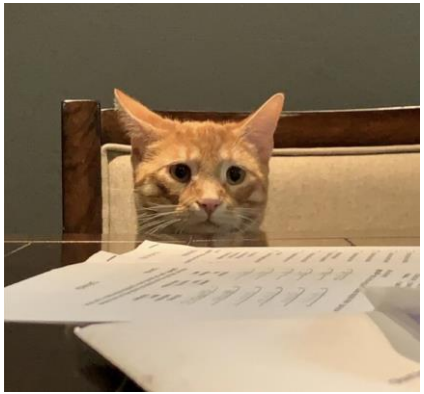
The g-Value reflects overall cognitive ability based on the broad CHC abilities judged by the evaluator to be strengths for the individual using the following scale:

≤ .50 = average overall ability is unlikely; .51 - .59 = more information needed; ≥ .60 = average overall ability is very likely

Demo



Case Study: Nemo



2nd grade student, Receives Speech Services

Overview of PSW Analysis with X-BASS

Use of this program should be guided by a thorough understanding of the Cross-Battery Assessment (XBA) approach and the Dual Discrepancy/Consistency (DD/C) operational definition of specific learning disability (SLD) as described in Essentials of Cross-Battery Assessment, 3rd Edition (Flanagan, Ortiz, & Alfonso, 2013).

To conduct a PSW analysis in a manner consistent with the DD/C model, at least seven CHC areas of cognitive functioning must be assessed (i.e., Gc, Gf, Glr, Gsm, Gv, Ga, and Gs). In addition to these seven areas, common neuropsychological domains that are often assessment in cases of suspected SLD include orthographic processing (OP), speed of lexical access (LA), cognitive efficiency (CE), and executive functions (EF). If any of these neuropsychological domains are evaluated, they may also be included in the PSW analysis.

Overview of PSW Analysis with X-BASS

In addition to CHC (and neuropsychological) domains, at least one area of academic performance must have been evaluated for inclusion in the PSW analysis. The software organizes subtests from achievement batteries into eight areas of achievement consistent with those listed in IDEA.

These areas are:

- Basic Reading Skills (BRS),
- Reading Fluency (RF),
- Reading Comprehension (RC),
- Math Calculation (MC),
- Math Problem Solving (MPS),
- Written Expression (WE),
- Listening Comprehension (LC),
- Oral Expression (OE).

Nemo Results

Areas of strength below form the Facilitating Cognitive Composite (FCC)		CHC ABILITY DOMAINS	SCORE	Areas of weakness below form the Inhibiting Cognitive Composite (ICC).	
Gc	S	WJ IV COG Comprehension-Knowledge (Gc) Test Comp	74		
Gf	S	WJ IV COG Fluid Reasoning (Gf) Test Comp	93		
Glr	S	WJ IV COG Long-Term Retrieval (Glr) Test Comp	90		
Gsm	S	WJ IV COG Short-Term Working Memory (Gsm:MW) Test Comp	90		
Gv	S	WJ IV COG Visual Processing (Gv) Test Comp	102		
		WJ IV COG Auditory Processing (Ga) Test Comp	75	W	*Ga*
Gs	S	WJ IV COG Cognitive Processing Speed (Gs:P) Test Comp	99		

CHC Composites designated as strengths are used for computation of the g-Value and FCC (top oval in the DD/C model) and those designated as weaknesses are used for computation of the ICC (bottom left oval in the DD/C model). When a domain contains a strength and a weakness, the strength is used in calculation of the g-Value/FCC and the weakness is used in the calculation of the ICC.

1. g-Value:
The *g*-Value reflects overall cognitive ability based on the CHC abilities judged by the evaluator to be strengths. The *g*-Value is interpreted according to the *likelihood* that an individual possesses at least average overall cognitive ability.

0.95

2a. Facilitating Cognitive Composite (FCC)
Represents an individual's overall general ability (based on strengths) and is used to evaluate differences relative to a specific of pattern of cognitive and academic weaknesses.

93

2b. Alternative Cognitive Composite (ACC)
You may enter an alternative value if desired or when the FCC is not believed to be the best estimate of general ability .

3. Inhibiting Cognitive Composite (ICC)
Represents an aggregate of an individual's overall weaknesses and is used to evaluate consistency and the relationship between cognitive and academic weaknesses. If there is only one cognitive weakness, the ICC is not calculated.

N/A

ICC will be used for PSW analysis

Display Results Again

Click to re-display pop up message regarding results of the current PSW analysis or when data are changed.

User Mode
- Beginner
- Intermediate
- Advanced

- Score difference will be considered rare/infrequent when it occurs 5% of the time (very strict value, best for multiple comparisons or tests with low reliability)
- Score difference will be considered rare/infrequent when it occurs 10% of the time (default value, best for standard analyses with composites and reliable tests)
- Score difference will be considered rare/infrequent when it occurs 15% of the time (very liberal value, increases false positive rate--not recommended)

4. Rarity/Frequency of Difference - FCC/ACC to Cognitive Weakness
Select base rate level for determining if the size of a difference occurs rarely or infrequently. The default value is 10%. A more conservative or liberal value may be selected. If multiple comparisons are made, a stricter value may be appropriate.

Nemo Results

Areas of strength below are likely consistent with the individual's overall general ability.		ACHIEVEMENT/SLD DOMAINS	SCORE	Areas of weakness below may be used as academic deficits in the DD/C model.	
		WJ IV ACH Basic Reading Skills (BRS) Test Comp	73		
		WJ IV ACH Letter-Word Identification (BRS;Grw-R:RD) Subtest	66	W	*BRS*
		WJ IV ACH Passage Comprehension (RDC;Grw-R:RC) Subtest	70	W	*RDC*
		WJ IV ACH Sentence Reading Fluency (RDF;Grw-R:RS) Subtest	69	W	*RDF*
		WJ IV ACH Written Language (WE) Test Comp	81		
		WJ IV ACH Written Expression (WE) Test Comp	74	W	*WE*
		WJ IV ACH Broad Mathematics (MC) Test Comp	83		
MC	S	WJ IV ACH Math Calculation Skills (MC) Test Comp	88	W	*MC*
MPS					
OE					
LC					

Composites or subtest scores designated as weaknesses may be used to represent academic deficits in PSW-A analyses (bottom right oval in the DD/C model). Only one academic weakness at a time is evaluated relative to a cognitive weakness and general ability, but any area may be selected in turn to examine other patterns of strengths and weaknesses on the PSW Analyzer tab.

ADVANCED PSW ANALYSIS

Selecting Specific Cognitive Weaknesses for the ICC

CAUTION: This feature is intended for advanced users only. It allows for selection of individual cognitive weaknesses in calculating the ICC rather than having it be comprised of all indicated weaknesses (default). This may be helpful in cases where an individual has a weakness in an area (e.g., Ga) that does not have a relationship to an academic area (e.g., basic math computation) but does have at least two or more other weaknesses that are (e.g., Gs and Gwm). Individual cognitive weaknesses need not be selected here as they can already be selected individually from the drop down menu of the bottom right oval of the PSW Analyzer. Unless you are certain of how to use this feature properly, it is recommended that you do not check any of the boxes and use the default values and menu options provided in the PSW Analyzer. To use an academic-specific ICC, check the box below next to the new

Gc	☐	
Gf	☐	
Glr	☐	
Gsm	☐	
Gv	☐	
Ga	☑	WJ IV COG Auditory Processing (Ga) Test Comp - 75
Gs	☐	

Academic-specific ICC VALUE = ☐ Check here to use this value

Nemo Results

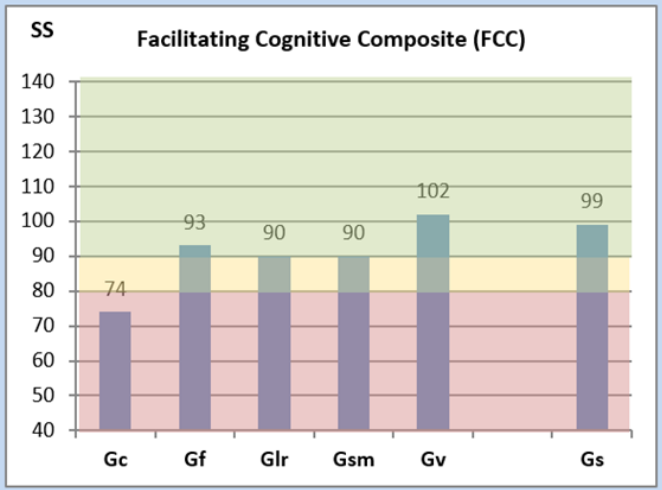
The Cognitive Strengths graph indicates the abilities used for the purpose of calculating the g-Value and FCC and which collectively represent general ability within the DD/C model. The *g*-Value is interpreted according to the *likelihood* that an individual possesses at least average overall cognitive ability.

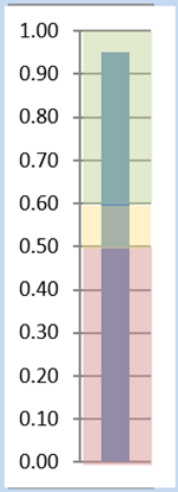
The g-Value represents how many and which abilities are strengths while the FCC indicates the magnitude of these strengths.

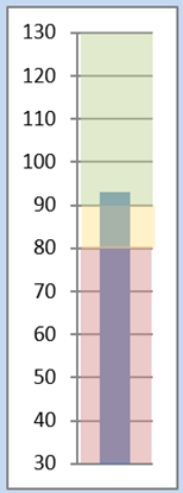
The Cognitive Weaknesses graph indicates the abilities used for the purpose of calculating the ICC. The ICC is the default value used to represent the area(s) of cognitive weakness in the DD/C model. It is compared to the FCC and evaluated for consistency with specific areas of academic weakness.

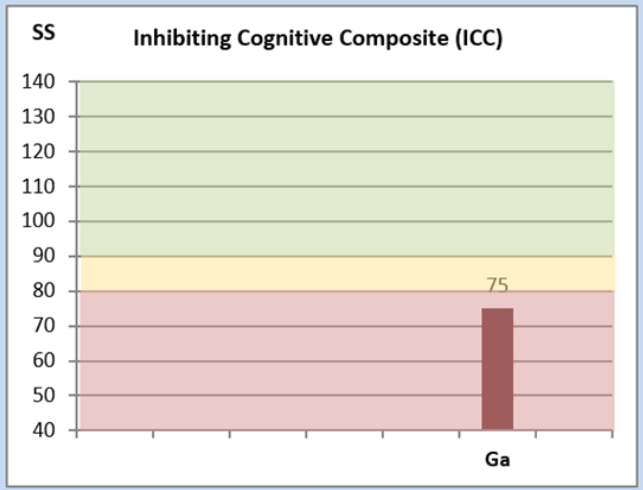
g-Value = 0.95

FCC = 93





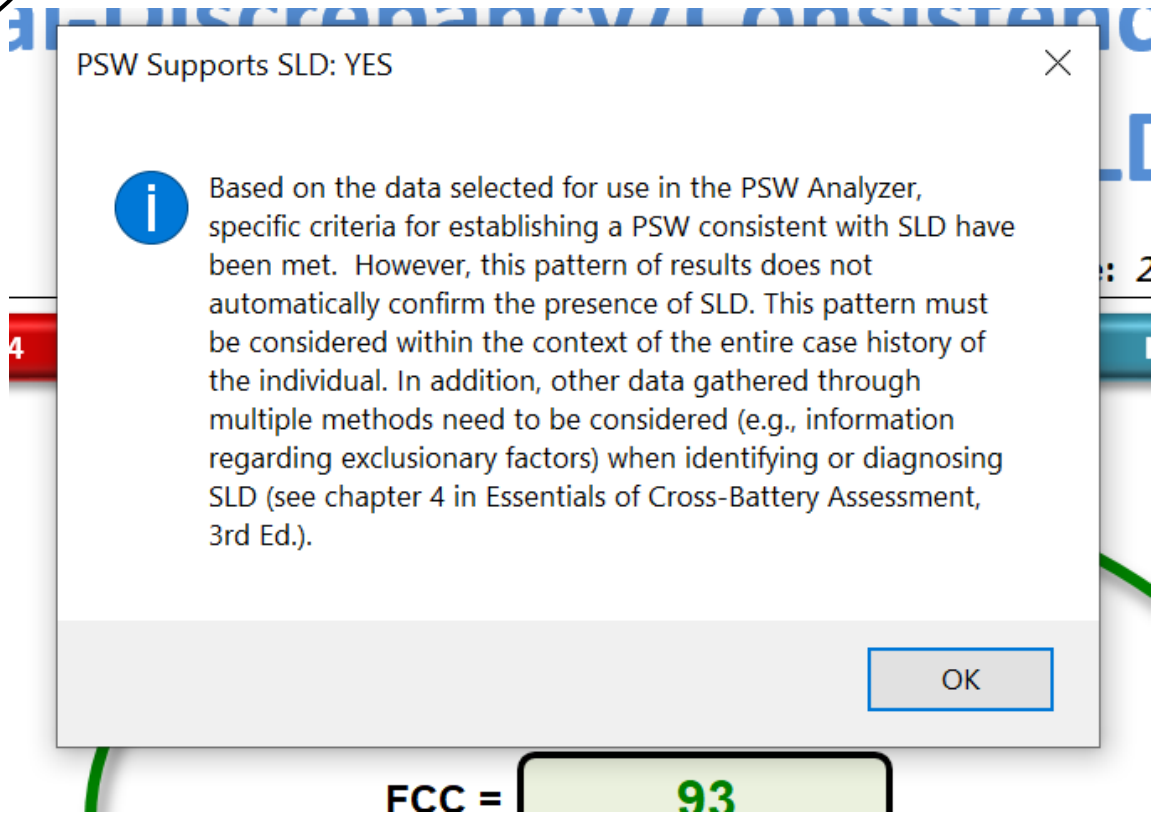




**Indicates a CHC domain that is comprised of*

**Indicates a CHC domain that is comprised of both a*

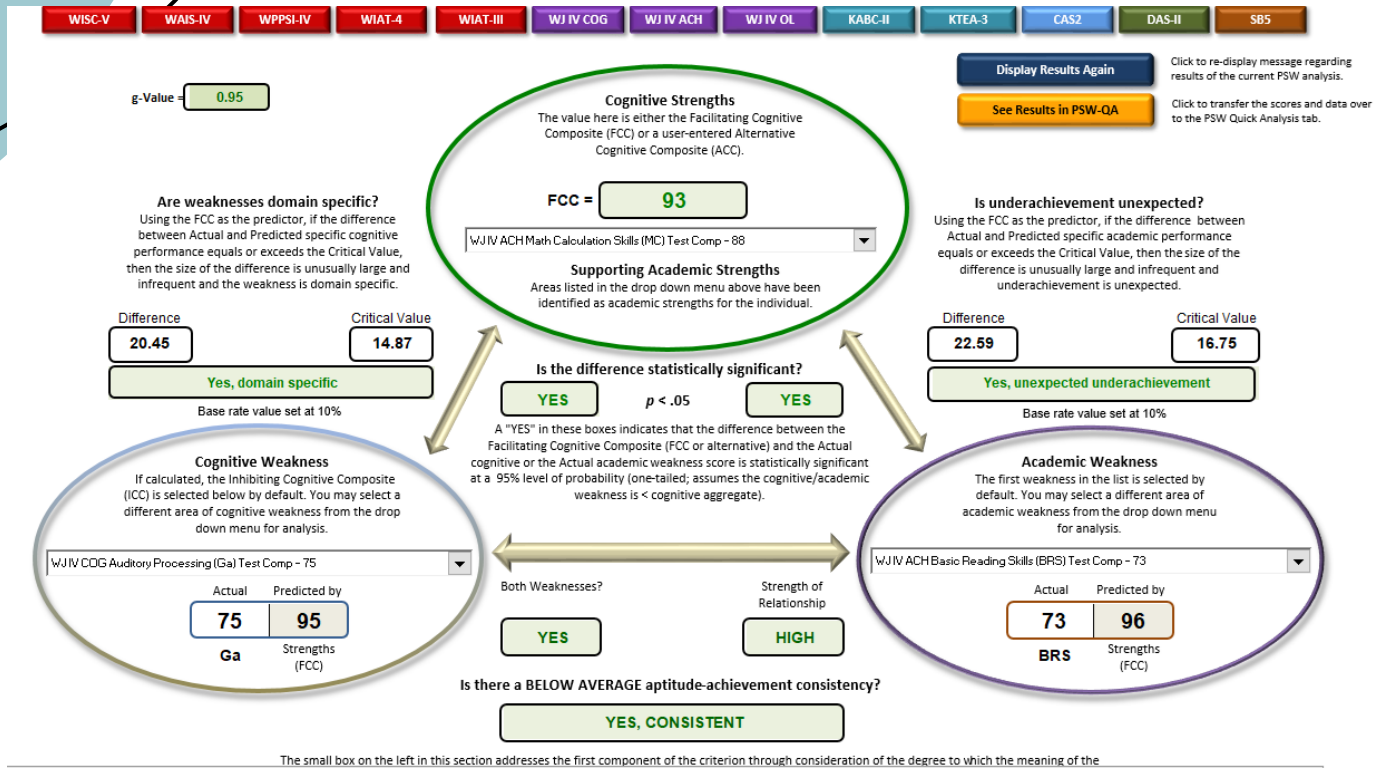
Nemo Results



Click on PSW Analyzer tab down at the bottom of the screen

This will take to the PSW page and a popup occurs letting you know if PSW supports SLD

Nemo Results



You can see this supports the dual discrepancy model.

He exhibits a processing deficit and academic deficit and they correlate.

Thanks!