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

Compiled by: [Leticia Zadrozny Zelaya](#), M.A., Ed.S., NCSP# 61147 , LEP 4090

The Xbass is based on the 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:

1. Crystalized knowledge* (Gc): The breadth and depth of knowledge including verbal communication and information.

2. Fluid Reasoning (Gf):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.

3. Short-term memory (Gsm): The ability to hold information in immediate awareness and then use it within a few seconds, also related to working memory.

4. Long-term memory (Glr): The ability to store information efficiently and retrieve it later through association.

5. Cognitive Processing Speed (Gs): The speed and efficiency in performing automatic or very simple cognitive tasks.

6. Visual Process (Gv):Spatial orientation, the ability to analyze and synthesize visual stimuli, and the ability to hold and manipulate mental images.

7. Auditory Processing (Ga): The ability to discriminate, analyze, and synthesize auditory stimuli. Auditory processing skills are related to phonological awareness.

*It's important to note that bilingual learners typically have lower crystallized intelligence scores than their monolingual peers. However, this does not mean they know less, they just may know less in English.

Introduction

1) Open the X-BASS excel program. Yes it can be slow. The green Start Here button starts in beginner mode (with lots of prompts and popups). The blue circle starts the program in either intermediate or advanced mode.
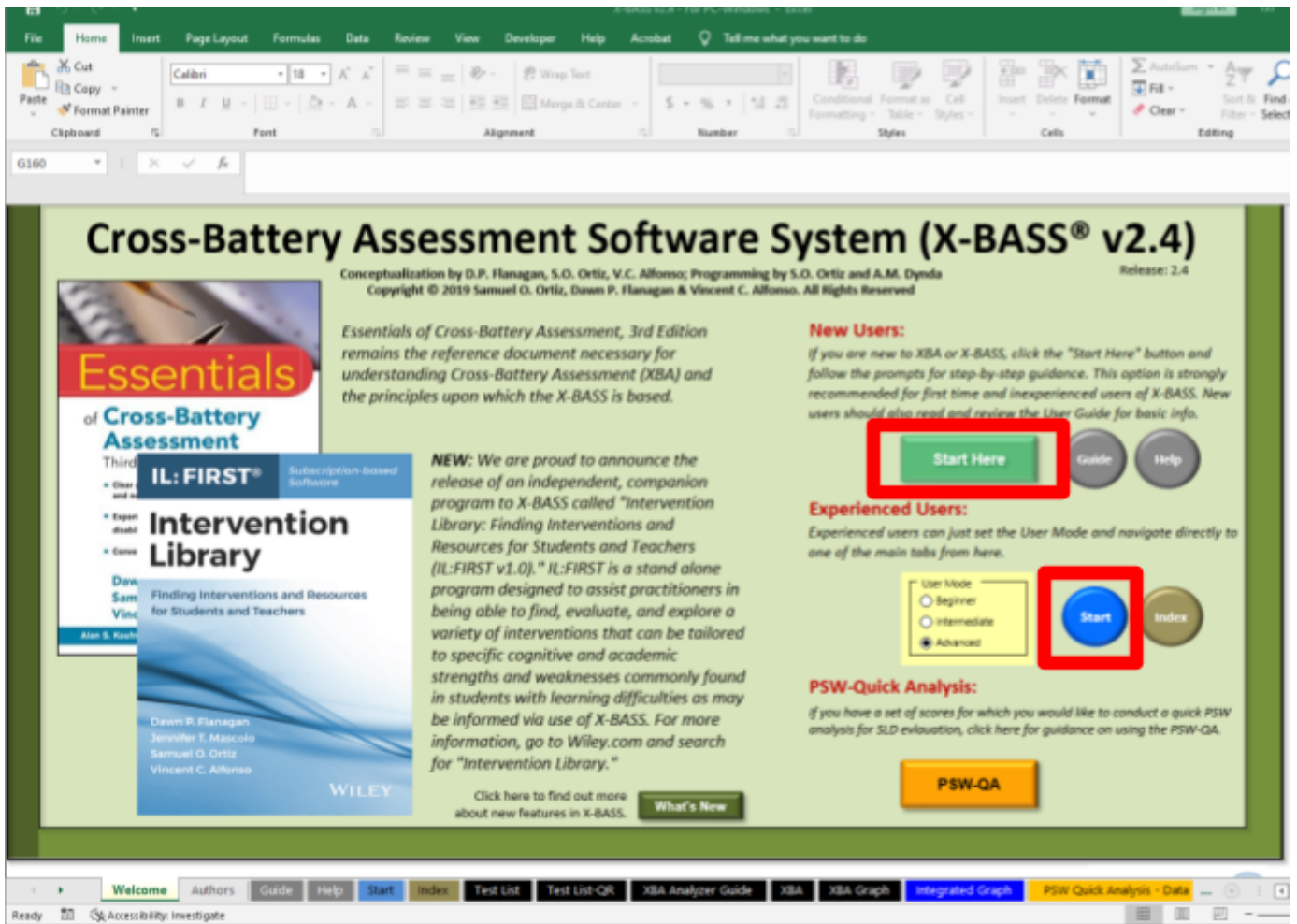
2) Enter the Name of Examinee, Date of Evaluation, Date of Birth, and Examinee's Grade. The age will be automatically calculated. If the student is an EL learner, make sure the box is checked under Create New Record.

A pop up will occur stating you are starting a new record.

3) If you click the Next Step Button at the top it will warn you that you have checked the student is an EL learner and will take you to the C-LIM portion of the program.

4) Determine the difference of your EL Learner

4a) Here are the definitions of Slightly Different, Moderately Different, and Markedly Different. Determine where your student fits. For this exercise, we will use Moderately Different.

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.

5) Go to the C-LIM Analyzer and enter the scores of the tests you have administered. This will auto populate the subtests in the specific areas where they are loaded in either culture or language.
   a) If you switch to a different test, the scores entered will remain and new subtests will be populated to enter scores.

| 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 | SBS |

| 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

	LOW		MODERATE		HIGH	
	CELL 1: LowC/LowL	Score	**CELL 2: LowC/ModL**	Score	**CELL 3: LowC/HighL**	Score
LOW	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 =	
	CELL 4: ModC/LowL	Score	**CELL 5: ModC/ModL**	Score	**CELL 6: ModC/HighL**	Score
MODERATE	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 =	
	CELL 7: HighC/LowL	Score	**CELL 8: HighC/ModL**	Score	**CELL 9: HighC/HighL**	Score
HIGH			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	

(Left vertical label: DEGREE OF CULTURAL LOADING)

6) Once scores are entered you can analyze the data and determine if the results are due to a difference of language and culture or a true learning disability. (Note: if the trend line follows the downward pattern, it is due to a difference of culture and language). Since this does not follow the downward trend, we can determine that Ziggs' struggle is more than being an English language learner.

7) Before you close the C-LIM, make sure to press the golden **TRANSFER SCORES** button. This will save you from inputting scores twice.

8) Go to the appropriate tab to enter any scores that were not entered through the C-LIM

Once scores are entered, make sure that you transfer to the Data Organizer. Fill in any scores that were not part of the CLIM. You will always have to enter composite scores. Once all the scores have been entered. Determine if criteria for cohesion is significant. This is a clinical judgment, the program cannot tell you if it is or is not. It will give you a warning but you have to determine it yourself.

Make sure at the end you transfer all scores to the **Data Organizer**

9) You can check the Graph tab next to the tab where you entered scores to see if they are normative weakness, within normal limits, or a normative strength.
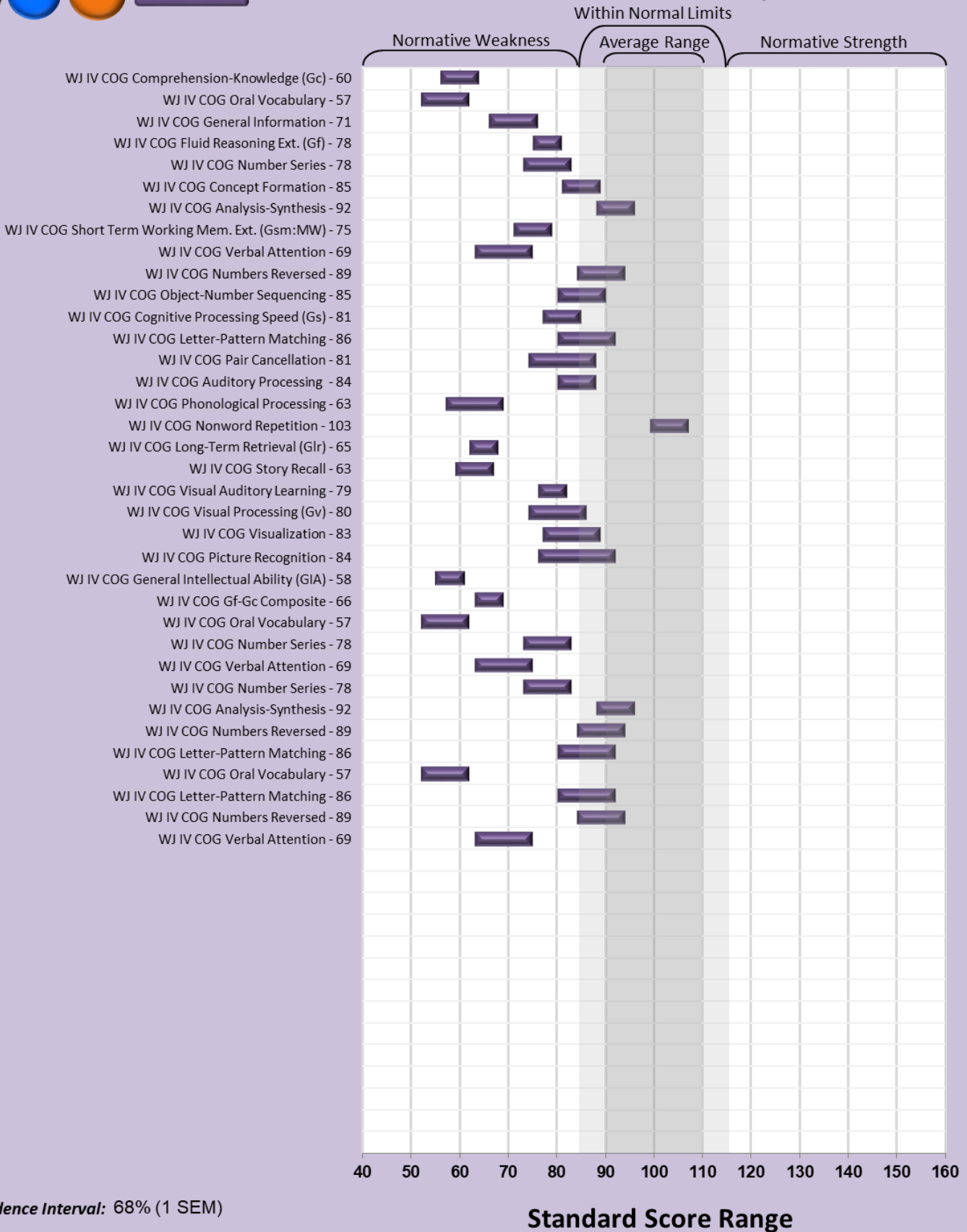
NAME: Ziggs   **AGE:** 10 years 7 month(s)   **DATE:** 10/4/2022

Index   Start   Print   WJ IV COG

WJ IV COG Score Graph

Within Normal Limits

Normative Weakness | Average Range | Normative Strength

WJ IV COG Comprehension-Knowledge (Gc) - 60
WJ IV COG Oral Vocabulary - 57
WJ IV COG General Information - 71
WJ IV COG Fluid Reasoning Ext. (Gf) - 78
WJ IV COG Number Series - 78
WJ IV COG Concept Formation - 85
WJ IV COG Analysis-Synthesis - 92
WJ IV COG Short Term Working Mem. Ext. (Gsm:MW) - 75
WJ IV COG Verbal Attention - 69
WJ IV COG Numbers Reversed - 89
WJ IV COG Object-Number Sequencing - 85
WJ IV COG Cognitive Processing Speed (Gs) - 81
WJ IV COG Letter-Pattern Matching - 86
WJ IV COG Pair Cancellation - 81
WJ IV COG Auditory Processing - 84
WJ IV COG Phonological Processing - 63
WJ IV COG Nonword Repetition - 103
WJ IV COG Long-Term Retrieval (Glr) - 65
WJ IV COG Story Recall - 63
WJ IV COG Visual Auditory Learning - 79
WJ IV COG Visual Processing (Gv) - 80
WJ IV COG Visualization - 83
WJ IV COG Picture Recognition - 84
WJ IV COG General Intellectual Ability (GIA) - 58
WJ IV COG Gf-Gc Composite - 66
WJ IV COG Oral Vocabulary - 57
WJ IV COG Number Series - 78
WJ IV COG Verbal Attention - 69
WJ IV COG Number Series - 78
WJ IV COG Analysis-Synthesis - 92
WJ IV COG Numbers Reversed - 89
WJ IV COG Letter-Pattern Matching - 86
WJ IV COG Oral Vocabulary - 57
WJ IV COG Letter-Pattern Matching - 86
WJ IV COG Numbers Reversed - 89
WJ IV COG Verbal Attention - 69

40   50   60   70   80   90   100   110   120   130   140   150   160

Confidence Interval: 68% (1 SEM)

Standard Score Range

Academics

1) You can click either at the top or scroll through the bottom tabs to find the academic tab you need for your student.
2) Enter scores just as you did for cognitive
3) In certain academic areas there is no button to Transfer to Data Organizer. You must check the boxes next to the scores to transfer the scores at the end.

* If you see clinical judgment needed you have to determine if the scores can be transferred to the data organizer, or do you need to follow up with more testing.

4) Click the Transfer Subtests to Data Organizer button down at the bottom. This will automatically take you to the Data Organizer tab.

5) Now that all the scores are in you can identify strengths and weaknesses.

COMPREHENSION-KNOWLEDGE (Gc)				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.				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	WJ IV COG Fluid Reasoning Ext. (Gf)	78	☐ Test Comp	Clear Score 1
		☐	Clear Score 2			☐	Clear Score 2
		☐	Clear Score 3			☐	Clear Score 3

LONG-TERM STORAGE AND RETRIEVAL (Glr)				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.				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	WJ IV COG Short-Term Working Mem. Ext. (Gsm:MW)	75	☐ Test Comp	Clear Score 1
		☐	Clear Score 2			☐	Clear Score 2
		☐	Clear Score 3			☐	Clear Score 3

VISUAL PROCESSING (Gv)				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.				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	WJ IV COG Auditory Processing (Ga)	84	☐ Test Comp	Clear Score 1
		☐	Clear Score 2			☐	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

Follow up Testing

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

Notice that a drop down menu is available that falls under that CHC G factor

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 Blending (Ga:PC)
TAPS-4 Phonological Deletion (Ga:PC)
TAPS-4 Syllabic Blending (Ga:PC)
TAPS-4 Word (Pair) Discrimination (Ga:PC)
TOLD-P:4 Phonemic Analysis (Ga:PC)
TOLD-P:4 Word Discrimination (Ga:US)
TOLD-P:5 Phonemic Analysis (Ga:PC)
TOLD-P:5 Word Discrimination (Ga:PC)

| 3 | 65 | A |
| 6 | 80 | divergent |

NOT COHESIVE: Use one, 2-subtest XBA composite

Comp

Reset Score Configuration | Evaluate Score Configuration | SS: 58
Go to Ga Test List Classifications | Transfer Comp(s) to Data Organizer | PR: 0.3rd

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.

OTHER PROCESSING AREA
(check these boxes to select score for integrated graph)

Clear Data | Enter scores below | Converted Standard Score | Composite Score Analyses

...ick Analysis | Data Organizer | Data Entry - Other | Data Organizer Graph | S&W Indicator | PSW-A Da...

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.

AUDITORY PROCESSING (Ga)
(check these boxes to select score for integrated graph)

Clear Data | Enter scores | Converted Standard Score | Composite Score Analyses

	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	A
WJ IV COG Phonological Processing (Ga:PC;Glr:FW)	63	63	A

Comp

COHESIVE: Use 4-subtest XBA composite | SS: 57
Reset Score Configuration | Evaluate Score Configuration | PR: 0.2nd
Go to Ga Test List Classifications | Transfer Comp(s) to Data Organizer

Strengths and Weaknesses

1) Click on the S&W Indicator button. This can be found either at the top of the page or the bottom of the page.
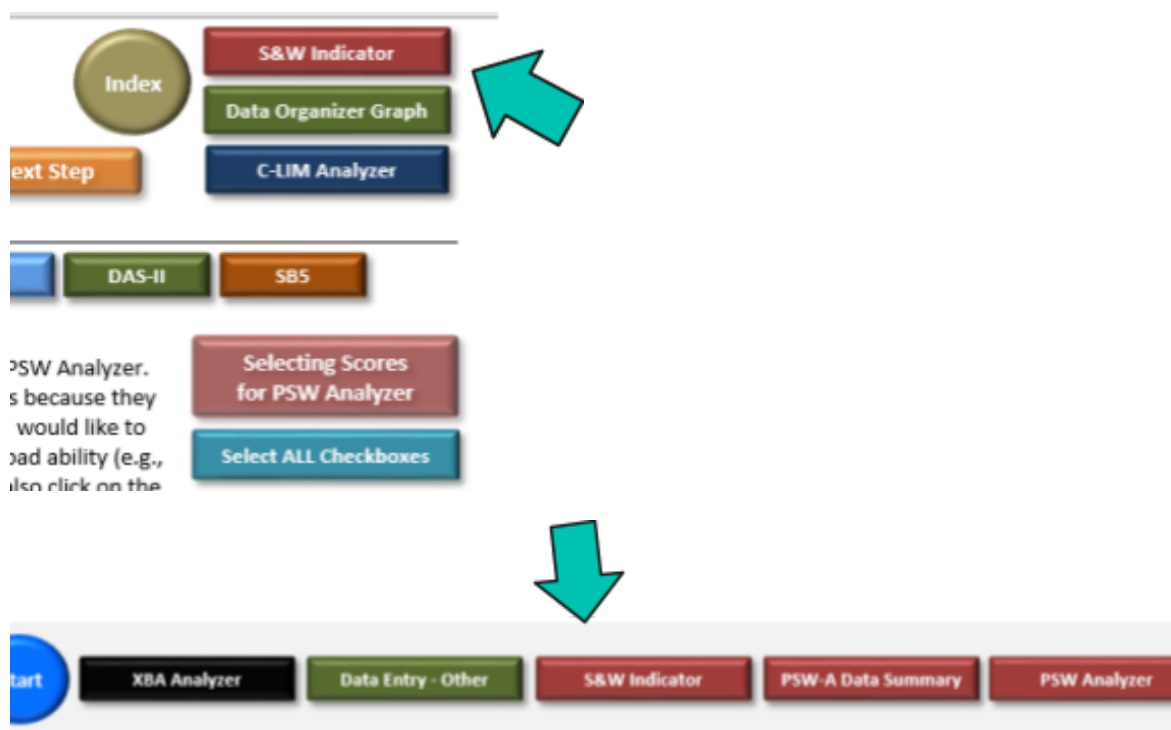
2) You will see the scores that you entered.
3) Determine if scores are a strength or weakness.
   a) **According to the XBASS program:** Indicate whether the CHC domains (highlighted in blue) and neuropsychological domains (highlighted in beige) represent strengths or weaknesses for the individual. 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.

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.

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

BASIC READING SKILLS (BRS)					READING COMPREHENSION (RDC)			
WJ IV ACH Basic Reading Skills (BRS) Test Comp	69	○ strength	◉ weakness		WJ IV ACH Passage Comprehension (RDC;Grw-R:RC) Subtest	72	○ strength	◉ weakness
WJ IV ACH Letter-Word Identification (BRS;Grw-R:RD) Subtest	75	○ strength	◉ weakness				○ strength	○ weakness
WJ IV ACH Word Attack (BRS;Grw-R:RD) Subtest	62	○ strength	◉ weakness				○ strength	○ weakness

READING FLUENCY (RDF)					WRITTEN EXPRESSION (WE)			
WJ IV ACH Reading Fluency (RDF) Test Comp	77	○ strength	◉ weakness		WJ IV ACH Broad Written Language (WE) Test Comp	71	○ strength	◉ weakness
		○ strength	○ weakness		WJ IV ACH Written Expression (WE) Test Comp	66	○ strength	◉ weakness
		○ strength	○ weakness		WJ IV ACH Spelling (WE;Grw-W:SG) Subtest	67	○ strength	◉ weakness

MATH CALCULATION (MC)					MATH PROBLEM SOLVING (MPS)			
WJ IV ACH Broad Mathematics (MC) Test Comp	76	○ strength	◉ weakness		WJ IV ACH Applied Problems (MPS;Gq:A3;Gf:RQ) Subtest	71	○ strength	◉ weakness
WJ IV ACH Math Calculation Skills (MC) Test Comp	80	○ strength	◉ weakness				○ strength	○ weakness
WJ IV ACH Calculation (MC;Gq:A3) Subtest	87	○ strength	◉ weakness				○ strength	○ weakness

ORAL EXPRESSION (OE)				LISTENING COMPREHENSION (LC)		
	○ strength	○ weakness			○ strength	○ weakness

4) If you click on the PSW Data Summary button you can see overall scores. For this student I would look at doing adaptive to determine if there is an intellectual disability.

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).	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.

	WJ IV COG Comprehension-Knowledge (Gc) Test Comp	60	W Gc*	**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.
	WJ IV COG Fluid Reasoning Ext. (Gf) Test Comp	78	W Gf	
	WJ IV COG Long-Term Retrieval (Glr) Test Comp	65	W Glr	**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.
	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	**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.
	Auditory Processing (Ga) Comp	57	W Ga	**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.
	WJ IV COG Cognitive Processing Speed (Gs:P) Test Comp	81	W Gs	

g-Value: **0.0**

Display Results Again

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

FCC: **0**

ACC: [ ]

User Mode
○ Beginner
○ Intermediate
◉ Advanced

ICC: **60**   ICC will be used for PSW analysis

○ 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.

4a) Even when you change visual processing and processing speed to a relative strength, their overall g-value is 0.10 and FCC is 77.

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).		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.		
		WJ IV COG Comprehension-Knowledge (Gc) Test Comp	60	W	Gc*	**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	**Display Results Again**
		WJ IV COG Fluid Reasoning Ext. (Gf) Test Comp	78	W	Gf			Click to re-display pop up message regarding results of the current PSW analysis or when data are changed.
		WJ IV COG Long-Term Retrieval (Glr) Test Comp	65	W	Glr	**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	
		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			**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 .		User Mode ○ Beginner ○ Intermediate ● Advanced
		Auditory Processing (Ga) Comp	57	W	Ga	**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
Gs	S	WJ IV COG Cognitive Processing Speed (Gs:P) Test Comp	81					

○ 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

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)

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.

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

Patterns of Strengths and Weaknesses

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 assessed 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.

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.**
CA Law § 3030. Eligibility Criteria.
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)

1) Click on PSW tab to identify strengths and weaknesses. Pop-up will let you know if the case meets PSWcriteria.

g-Value = 0.95

Display Results Again — Click to re-display message regarding results of the current PSW analysis.

See Results in PSW-QA — Click to transfer the scores and data over to the PSW Quick Analysis tab.

Cognitive Strengths
The value here is either the Facilitating Cognitive Composite (FCC) or a user-entered Alternative Cognitive Composite (ACC).

FCC = 93

WJ IV ACH Math Calculation Skills (MC) Test Comp – 88 ▾

Supporting Academic Strengths
Areas listed in the drop down menu above have been identified as academic strengths for the individual.

Are weaknesses domain specific?
Using the FCC as the predictor, if the difference between Actual and Predicted specific cognitive performance equals or exceeds the Critical Value, then the size of the difference is unusually large and infrequent and the weakness is domain specific.

Difference — 20.45
Critical Value — 14.87

Yes, domain specific

Base rate value set at 10%

Is underachievement unexpected?
Using the FCC as the predictor, if the difference between Actual and Predicted specific academic performance equals or exceeds the Critical Value, then the size of the difference is unusually large and infrequent and underachievement is unexpected.

Difference — 22.59
Critical Value — 16.75

Yes, unexpected underachievement

Base rate value set at 10%

Is the difference statistically significant?

YES $p < .05$ YES

A "YES" in these boxes indicates that the difference between the Facilitating Cognitive Composite (FCC or alternative) and the Actual cognitive or the Actual academic weakness score is statistically significant at a 95% level of probability (one-tailed; assumes the cognitive/academic weakness is < cognitive aggregate).

Cognitive Weakness
If calculated, the Inhibiting Cognitive Composite (ICC) is selected below by default. You may select a different area of cognitive weakness from the drop down menu for analysis.

WJ IV COG Auditory Processing (Ga) Test Comp – 75 ▾

Actual	Predicted by
75	95
Ga	Strengths (FCC)

Academic Weakness
The first weakness in the list is selected by default. You may select a different area of academic weakness from the drop down menu for analysis.

WJ IV ACH Basic Reading Skills (BRS) Test Comp – 73 ▾

Actual	Predicted by
73	96
BRS	Strengths (FCC)

Both Weaknesses?   Strength of Relationship

YES   HIGH

Is there a BELOW AVERAGE aptitude-achievement consistency?

YES, CONSISTENT

The small box on the left in this section addresses the first component of the criterion through consideration of the degree to which the meaning of the

2) Use the tabs in cognitive weaknesses and academic weaknesses to determine if a processing deficit impacts that particular academic ability.

If you have any questions or want to consult, contact me.