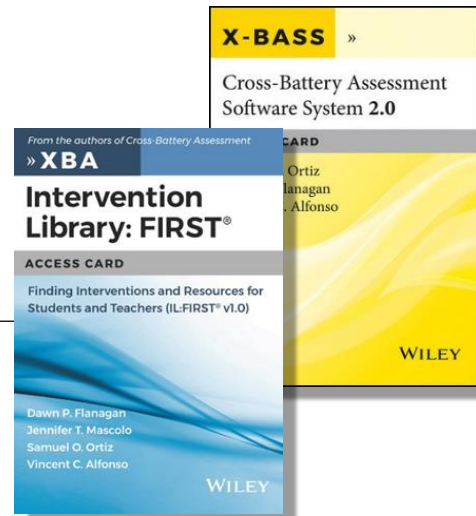


Evidence-based Assessment of English Learners: Contemporary PSW evaluation for SLD with X-BASS, C-LIM, and the Ortiz PVAT.

Texas Educational Diagnostician's Association

Waco, TX
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Test Score Validity and Defensible Interpretation Requires “True Peer” Comparison

Example of Potential Construct Invalidity:

“Assemble these blocks together in the correct manner so they appear identical to this illustration.”



A test designed to measure visual processing (Gv) in ELs must avoid over-reliance on language ability (Gc) or else measurement of visual processing may be confounded with language ability.

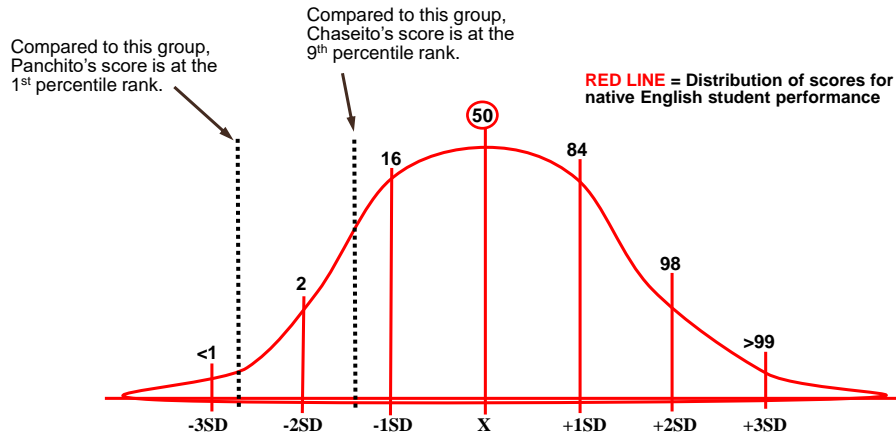
Example of Potential Interpretive Invalidity:

“After putting a blue block on top of a purple one, put the green block on the blue one.”



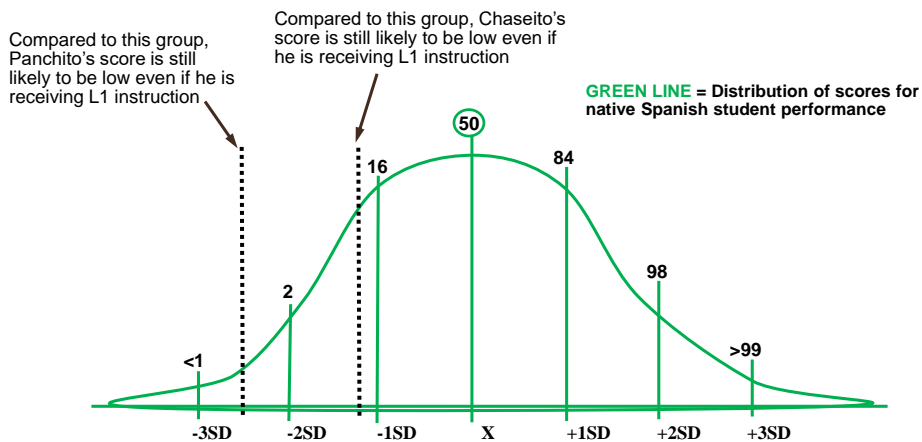
A test designed to measure English language ability (Gc) is valid for EL's ability *in English*, but poor performance cannot be ascribed to a potential disability unless developmental differences in English have been controlled.

Diagnostic Question: Does Chaseito's or Panchito's rate of progress suggest cultural/linguistic difference or possible disorder?



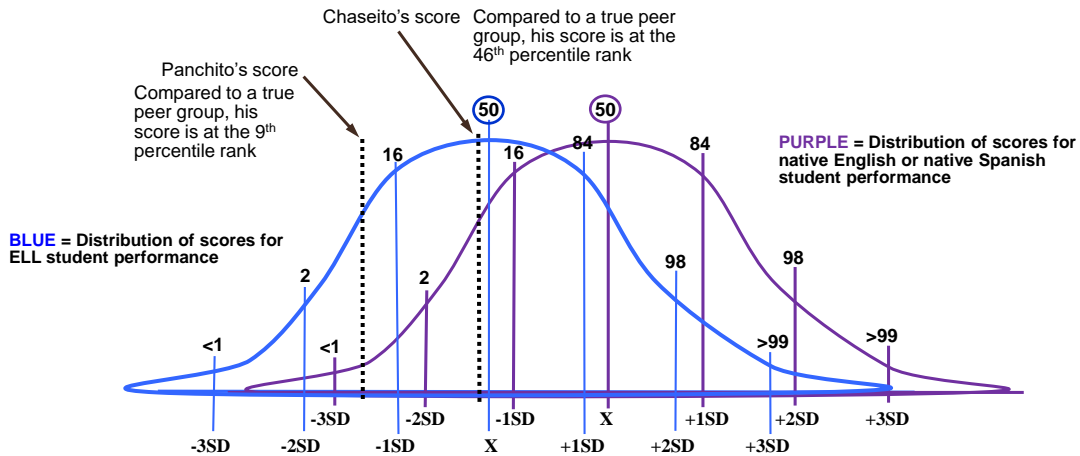
For the purposes of determining whether a disability exists, use of a monolingual English speaking comparison group is discriminatory and makes it appear incorrectly that both students might have some type of disability.

Diagnostic Question: Does Chaseito's or Panchito's rate of progress suggest cultural/linguistic difference or possible disorder?



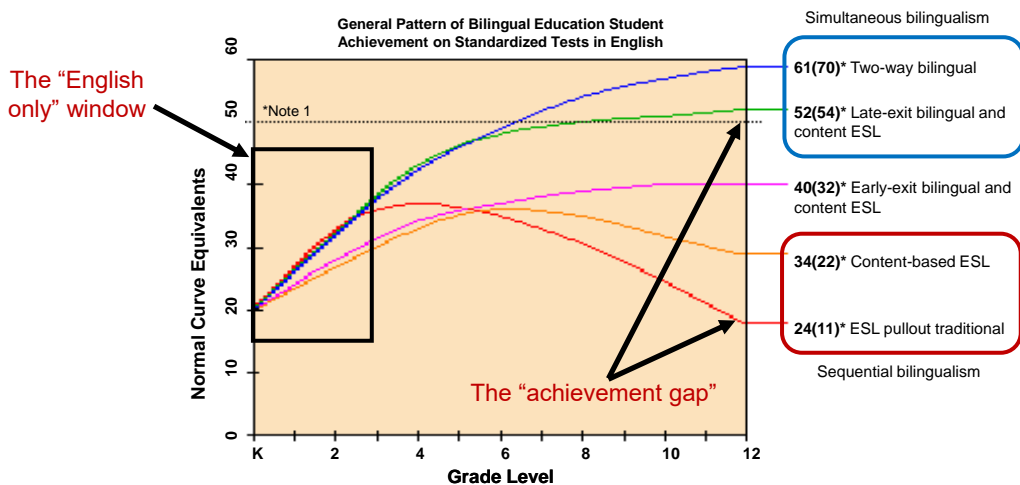
Similarly, use of a monolingual, native-language speaking group remains discriminatory because neither student is monolingual anymore (even when receiving native language instruction) and it continues to make it appear incorrectly that both Chaseito and Panchito have some type of disability.

Diagnostic Question: Does Chaseito's or Panchito's rate of progress suggest cultural/linguistic difference or possible disorder?



Whether conducted through RTI/MTSS or testing, only use of a “true peer” comparison group provides the basis for making non-discriminatory diagnostic decisions as long as there is control for developmental language differences between English learners and English speakers and among English learners and other English learners.

Academic Test Score Validity Requires “True Peer” Comparison



Adapted from: Thomas, W. & Collier, V. (1997). Language Minority Student Achievement and Program Effectiveness. Washington DC: National Clearinghouse for Bilingual Education.

Test Score Validity and Defensible Interpretation Requires “True Peer” Comparison

For native English speakers, growth of language-related abilities are tied closely to age because the process of learning a language begins at birth and is fostered by formal schooling. Thus, age-based norms effectively control for variation in development and provide an appropriate basis for comparison. However, this is not true for English learners who may begin learning English at various points after birth and who may receive vastly different types of formal education from each other.

Development Varies by Exposure to English – Not relative dominance

“It is unlikely that a second-grade English learner at the early intermediate phase of language development is going to have the same achievement profile as the native English-speaking classmate sitting next to her. The norms established to measure fluency, for instance, are not able to account for the language development differences between the two girls. A second analysis of the student’s progress compared to linguistically similar students is warranted.” (p. 40)

- Fisher & Frey, 2012

Processes and Procedures for Addressing Test Score Validity

In what manner exactly, is evidence-based, nondiscriminatory assessment conducted and to what extent is there any research to support the use of any of the following methods as being capable of establishing sufficient test score validity?

• **Modified Methods of Evaluation**

- *Working around the language by modifying/altering the assessment*

• **Nonverbal Methods of Evaluation**

- *Avoiding the language by evaluating areas unrelated to language*

• **Dominant Language Evaluation**

- *Choosing a language based simply on relative proficiency*

Current Approaches Fail to Establish Test Score Validity

| Evaluation Issues and Methods | Norm sample representative of bilingual development | Measures a wider range of school-related abilities | Does not require the evaluator to be bilingual | Adheres to the test's standardized protocol | Substantial research base on bilingual performance | Sufficient to identify or diagnosis disability | Accounts for variation in bilingual development | Most likely to yield reliable and valid data and information | Provides extensive data regarding development |
|--|---|--|--|---|--|--|---|--|---|
| Modified or Altered Assessment | ✗ | ✓ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Language Reduced Assessment | ✗ | ✗ | ✓ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Dominant Language Assessment in L1: native only | ✗ | ✓ | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Dominant Language Assessment in L2: English only | ✗ | ✓ | ✓ | ✓ | ✓ | ✗ | ✗ | ✗ | ✗ |

All approaches are limited in some manner when addressing test score validity and none are sufficient to diagnosis a disability, account for variation in bilingual development, represent a form or manner that automatically yields reliable and valid results, and do not provide extensive data regarding cognitive and school-based learning and development.

The validity of an interpretation regarding disability requires an unbiased standard for comparison.

*Whatever method or approach may be employed in evaluation of EL's, the fundamental obstacle to nondiscriminatory interpretation rests on the degree to which the examiner is able to defend claims of **test score (construct and interpretive) validity** that is being used to support diagnostic conclusions. This idea is captured by and commonly referred to as a question of:*

"DIFFERENCE vs. DISORDER?"

Simply absolving oneself from responsibility of establishing test score validity, for example via wording such as, "all scores should be interpreted with extreme caution" does not in any way provide a defensible argument regarding the validity of obtained test results and does not permit valid diagnostic inferences or conclusions to be drawn from them.

Test score validity must be evaluated or established via use of a "true peer" comparison standard and the only manner in which to accomplish this task is with evidence and data.

The Culture-Language Interpretive Matrix (C-LIM)

Addressing test score validity for ELLs

Translation of Research into Practice

1. The use of various traditional methods for evaluating ELLs, including testing in the dominant language, modified testing, nonverbal testing, or testing in the native language do not ensure valid results and provide no mechanism for determining whether results are valid, let alone what they might mean or signify.
2. The pattern of ELL test performance, when tests are administered in English, has been established by research and is predictable and based on the examinee's degree of English language proficiency and acculturative experiences/opportunities as compared to native English speakers.
3. The use of research on ELL test performance, when tests are administered in English, provides the only current method for applying evidence to determine the extent to which obtained results are likely valid (a minimal or only contributory influence of cultural and linguistic factors), possibly valid (minimal or contributory influence of cultural and linguistic factors but which requires additional evidence from native language evaluation), or likely invalid (a primary influence of cultural and linguistic factors).
4. The principles of ELL test performance as established by research are the foundations upon which the C-LIM is based and serve as a de facto norm sample for the purposes of comparing test results of individual ELLs to the performance of a group of average ELLs with a specific focus on the attenuating influence of cultural and linguistic factors.

The Culture-Language Interpretive Matrix (C-LIM)

GENERAL RULES AND GUIDANCE FOR EVALUATION OF TEST SCORE VALIDITY

There are two basic criteria that, when both are met, provide evidence to suggest that test performance reflects the primary influence of cultural and linguistic factors and not actual ability, or lack thereof. These criteria are:

1. *There exists a general, overall pattern of decline in the scores from left to right and diagonally across the matrix where performance is highest on the less linguistically demanding/culturally loaded tests (low/low cells) and performance is lowest on the more linguistically demanding/culturally loaded tests (high/high cells), and;*
2. *The magnitude of the aggregate test scores across the matrix for all cells fall within or above the expected range of difference (shaded area around the line) determined to be most representative of the examinee's background and development relative to the sample on whom the test was normed.*

Results are
INVALID
only if both
conditions
are met.

When both criteria are observed, it may be concluded that the test scores are likely to have been influenced primarily by the presence of cultural/linguistic variables and therefore are not likely to be valid and should not be interpreted. If either criterion is not met, the results can be assumed to be **VALID**.

Research Foundations of the C-LIM

Additional Issues in Evaluation of Test Score Patterns

Evaluation of test score validity, particularly in cases where results are “possibly valid,” includes considerations such as:

1. Is the Tiered graph consistent with the main Culture-Language graph or the other secondary (language-only/culture-only) graphs?

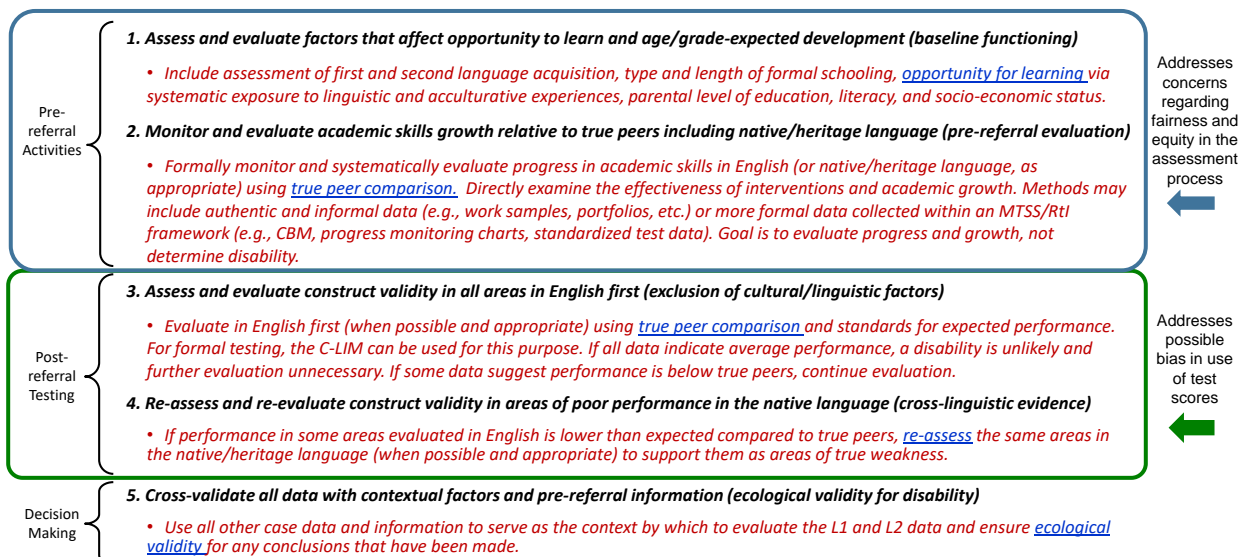
2. Is there any variability in the scores that form the aggregate in a particular cell that may be masking low performance?

3. Is the pattern of scores consistent with a developmental explanation of the examinee's educational program and experiences?

4. Is the pattern of scores consistent with a developmental explanation of the examinee's linguistic/acculturative learning experiences?

Evaluation of results using all graphs, including secondary ones, identification of score variability in relation to CHC domains or task characteristics, and evaluation of educational, cultural, and linguistic developmental experiences assists in determining the most likely cause of score patterns and overall test score validity.

A Best Practice Framework for Comprehensive Evaluation of ELs



Practical Considerations for Addressing Test Score Validity in Evaluation of ELs

1. The usual purpose of testing is to identify deficits in ability (i.e., low scores)
2. Validity is more of a concern for low scores than average/higher scores because:
 - Test performances in the average range are NOT likely a chance finding and strongly suggests average ability (i.e., no deficits in ability)
 - Test performances that are below average MAY be a chance finding because of experiential or developmental differences and thus do not automatically confirm below average ability (i.e., possible deficits in ability)
3. Therefore, testing in one language only (English or native language) means that:
 - It can be determined that a student DOES NOT have a disability (i.e., if all scores are average or higher, they are very likely to be valid)
 - It CANNOT be determined if the student has a disability (i.e., low scores must be validated as true indicators of deficit ability)
4. Testing in both languages (English and native language) is necessary to determine disability
 - Testing requires confirmation that deficits are not language-specific and exist in both languages (although low performance in both can result from other factors)
5. All low test scores, whether in English or the native language, must be validated
 - Low scores from testing in English can be validated via research underlying the C-LIM
 - Low scores from testing in the native language cannot be validated with research

Translating Research into Practice

| Evaluation Issues and Methods | Norm sample representative of bilingual development | Measures a wider range of school-related abilities | Does not require the evaluator to be bilingual | Adheres to the test's standardized protocol | Substantial research base on bilingual performance | Sufficient to identify or diagnosis disability | Accounts for variation in bilingual development | Most likely to yield reliable and valid data and information | Provides extensive data regarding development |
|---|---|--|--|---|--|--|---|--|---|
| Modified or Altered Assessment | ✗ | ✓ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Reduced-language Assessment | ✗ | ✗ | ✓ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Dominant Monolingual Assessment in L1: native only | ✗ | ✓ | ✗ | ✓ | ✗ | ✗ | ✗ | ✗ | ✗ |
| Dominant Monolingual Assessment in L2: English only | ✗ | ✓ | ✓ | ✓ | ✓ | ✗ | ✗ | ✗ | ✗ |
| Multilingual Assessment in L1 + L2 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Multilingual Assessment combined with the C-LIM resolves all validity issues, and by applying research on EL test performance, they can be used to define and establish a "true peer" reference group for disability-based evaluations.

X-BASS v2.3 New Features: PSW Quick Analysis

Start/Data Record Management

Release: 2.3



Tab Help



Next Step

WISC-V WAIS-IV WPPSI-IV WIAT-III WI IV COG WI IV ACH WI IV OL KABC-II KTEA-3 CAS2 DAS-II SBS

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)

*Name of Examinee:
 Name of Evaluator:
 Examinee's Age:

2. ENTER DATES/GRADE

*Date of Evaluation:
 *Date of Birth:
 *Examinee's Grade:

Use mm/dd/yyyy
 if an error occurs,
 try yyyy/mm/dd.
 PK,K,1-12,12+

3. CREATE NEW DATA RECORD

Create New Record

Check box if examinee is an English learner (EL) ☐

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

The PSW Quick Analysis provides a streamlined way to evaluate SLD using only 8 scores (7 cognitive and 1 academic). Although the analysis is exactly the same as in the full PSW Analyzer, this option provides a simpler interface with minimal results that may be easier to present and explain to others. It is safe enough for beginners but useful for advanced users too.

...to conduct PSW...

PSW Quick Analysis

...Database" button. This action
 base for use with the new version.

Export Current Database

...note that you must have already
 saved, use this button to import it.

Import Saved Database

...n" button. CAUTION: This action
 will be permanently erased.

Clear Data/Reset Program

CAUTION: Make sure this is what you

Delete Record

To CHECK for updates to X-BASS, click the "Check for Updates" button. Note: an internet connection is required to determine if an update is available.

Check for Updates

X-BASS v2.3 New Features: PSW Quick Analysis

PSW Quick Analysis - Data Entry

Release: 2.3



Tab Help



Next Step

PSW-Quick Analysis is intended for advanced and experienced users only. The purpose is to provide a quick overview of test data relative to SLD within a PSW model (DD/C) prior to engaging in any examination of composite score cohesion relative to psychometric and theoretical issues. Although the principles by which this analysis is conducted are identical to what would appear within the full evaluation in the PSW Analyzer, this method does not provide a complete, thorough, or detailed explanation of test score data and SHOULD NOT be used by itself to establish the presence of SLD. As this method does not evaluate cohesion or assess follow up, use of PSW - Quick Analysis should be viewed only as a preliminary evaluation which must be bolstered by additional corroborating evidence including a full analysis via the PSW Analyzer.

After entering the required data in the cognitive and academic sections below, click the yellow button to the right to view results of PSW Quick Analysis.

EXAMINEE'S GRADE (select from drop down menu) IS EXAMINEE AN ENGLISH LEARNER? (select from drop down menu)

(required, unless entered on Start tab) (default = "No")

View PSW QA Results

COGNITIVE PROCESSING DOMAINS - enter at least one score in EACH cognitive domain and indicate them as S or W.

CRYSTALLIZED INTELLIGENCE (Gc)

☐ strength ☐ weakness

LONG-TERM STORAGE AND RETRIEVAL (Glr)

☐ strength ☐ weakness

VISUAL PROCESSING (Gv)

☐ strength ☐ weakness

PROCESSING SPEED (Ga)

☐ strength ☐ weakness

FLUID REASONING (Gf)

☐ strength ☐ weakness

SHORT-TERM MEMORY (Gsm)

☐ strength ☐ weakness

AUDITORY PROCESSING (Ga)

☐ strength ☐ weakness

OTHER COGNITIVE PROCESS - optional

☐ strength ☐ weakness

The PSW Quick Analysis is ideal for new users and offers a simplified interface and results output for easy interpretation.

Other cognitive processes may also be entered for analysis.

Clear Cognitive Data

ACADEMIC SKILLS DOMAINS - enter at least ONE score which can appear in any domain and indicate it as S or W and as composite or subtest.

BASIC READING SKILLS (BRS)

☐ strength ☐ weakness ☐ composite ☐ subtest

READING COMPREHENSION (RDC)

☐ strength ☐ weakness ☐ composite ☐ subtest

READING FLUENCY (RDF)

☐ strength ☐ weakness ☐ composite ☐ subtest

WRITTEN EXPRESSION (WE)

☐ strength ☐ weakness ☐ composite ☐ subtest

X-BASS v2.3 New Features: PSW Quick Analysis

ACADEMIC SKILLS DOMAINS - enter at least **ONE** score which can appear in any domain and indicate it as S or W and as composite or subtest.

| BASIC READING SKILLS (BRS) | | | | READING COMPREHENSION (RDC) | | | | | |
|----------------------------|--------------------------------|--------------------------------|---------------------------------|-------------------------------|----------------------|--------------------------------|--------------------------------|---------------------------------|-------------------------------|
| <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | <input type="radio"/> composite | <input type="radio"/> subtest | <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | <input type="radio"/> composite | <input type="radio"/> subtest |
| <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | <input type="radio"/> composite | <input type="radio"/> subtest | <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | <input type="radio"/> composite | <input type="radio"/> subtest |
| <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | <input type="radio"/> composite | <input type="radio"/> subtest | <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | <input type="radio"/> composite | <input type="radio"/> subtest |

| READING FLUENCY (RDF) | | | | WRITTEN EXPRESSION (WE) | | | | | |
|-----------------------|--------------------------------|--------------------------------|---------------------------------|-------------------------------|----------------------|--------------------------------|--------------------------------|---------------------------------|-------------------------------|
| <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | <input type="radio"/> composite | <input type="radio"/> subtest | <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | <input type="radio"/> composite | <input type="radio"/> subtest |
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| MATH CALCULATION (MC) | | | | MATH PROBLEM SOLVING (MPS) | | | | | |
|-----------------------|--------------------------------|--------------------------------|---------------------------------|-------------------------------|----------------------|--------------------------------|--------------------------------|---------------------------------|-------------------------------|
| <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | <input type="radio"/> composite | <input type="radio"/> subtest | <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | <input type="radio"/> composite | <input type="radio"/> subtest |
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| ORAL EXPRESSION (OE) | | | | LISTENING COMPREHENSION (LC) | | | | | |
|----------------------|--------------------------------|--------------------------------|---------------------------------|-------------------------------|----------------------|--------------------------------|--------------------------------|---------------------------------|-------------------------------|
| <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | <input type="radio"/> composite | <input type="radio"/> subtest | <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | <input type="radio"/> composite | <input type="radio"/> subtest |
| <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | <input type="radio"/> composite | <input type="radio"/> subtest | <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | <input type="radio"/> composite | <input type="radio"/> subtest |
| <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | <input type="radio"/> composite | <input type="radio"/> subtest | <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | <input type="radio"/> composite | <input type="radio"/> subtest |

[Clear Academic Data](#)

OTHER/NEUROPSYCH PROCESSING DOMAINS - Scores are optional in this section, however, areas of weakness are used in PSW analysis.

| LEARNING EFFICIENCY (GI) | | | | ORTHOGRAPHIC PROCESSING (OP) | | | |
|--------------------------|--------------------------------|--------------------------------|--|------------------------------|----------------------|--------------------------------|--------------------------------|
| <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | | | <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness |
| <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | | | <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness |

| RETRIEVAL FLUENCY (Gr) | | | | COGNITIVE EFFICIENCY (CE) | | | |
|------------------------|--------------------------------|--------------------------------|--|---------------------------|----------------------|--------------------------------|--------------------------------|
| <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | | | <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness |
| <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness | | | <input type="text"/> | <input type="radio"/> strength | <input type="radio"/> weakness |

[Clear Other Data](#)

[Clear All PSW-QA Data](#)
[Clear All S/W Selections](#)
[Save PSW-QA Results](#)
[Return to Top](#)
[Print Tab](#)

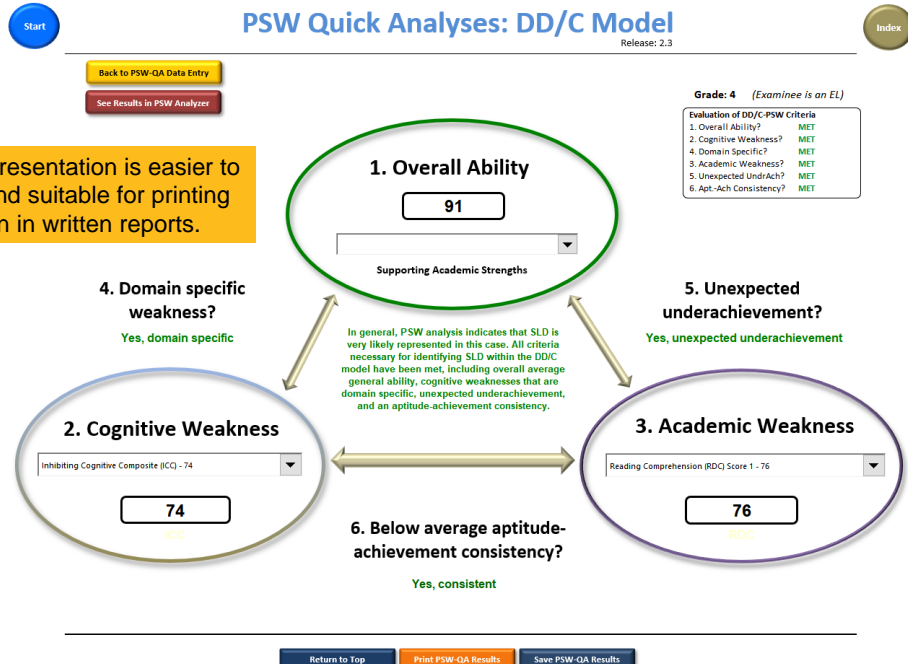
Only one score each of the seven cognitive areas and one score in any of the academic areas (8 scores total) is sufficient to conduct PSW Quick Analysis.

PSW Quick Analysis can include "other cognitive" and neuropsych processing domains.

X-BASS v2.3 New Features: PSW Quick Analysis

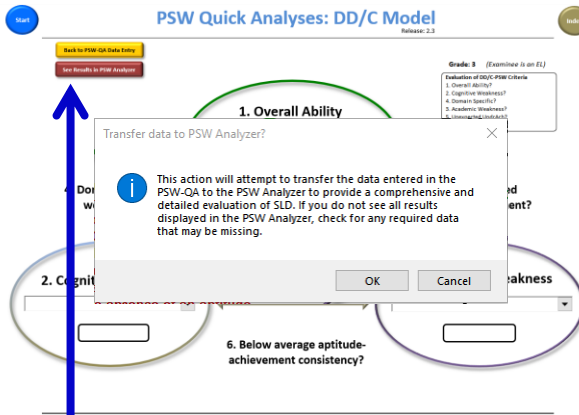
PSW Quick Analyses: DD/C Model

Release: 2.3



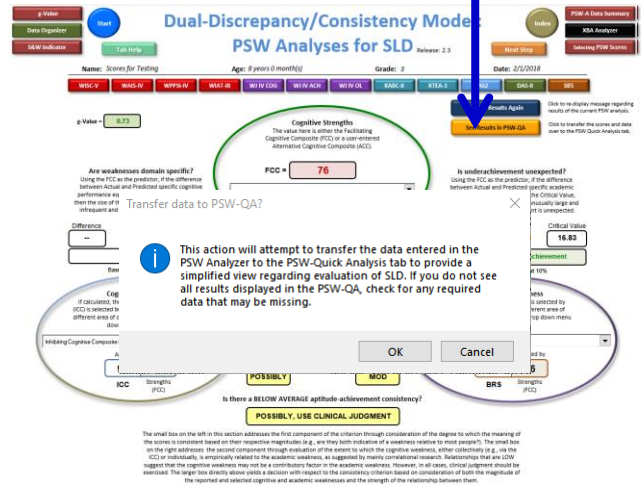
The simplified presentation is easier to comprehend and suitable for printing and inclusion in written reports.

X-BASS v2.3 New Features: Two-way PSW data/results transfer



If you use the PSW-QA first, you can click the brown button and have the results transferred to and displayed in the full PSW Analyzer.

If you use the PSW Analyzer first, you can click the yellow button and have the results transferred to and displayed in the PSW Quick Analyzer.



X-BASS v2.3 New Features: Test List-QR has new tests/batteries and auto display of subtests

| Test of Auditory Processing Skills-4 (TAPS-4) | |
|---|---|
| List of Test/Battery Names in X-BASS | Subtests on Test of Auditory Processing Skills-4 (TAPS-4) |
| 1 Academic Achievement Battery (AAB) | 1 TAPS-4 Auditory Comprehension (Gc1:L5:Lc) |
| 2 Auditory Processing Abilities Test (APAT) | 2 TAPS-4 Auditory Figure-Ground (Ga:UR) |
| 3 Auditory Phoneme Sequencing Test (APST) | 3 TAPS-4 Number Memory Forward (Gsm:MS) |
| 4 Auditory Skills Assessment (ASA) | 4 TAPS-4 Number Memory Reversed (Gsm:MW) |
| 5 Batería III Woodcock-Munoz: Aprovechamiento (Batería III ACH) | 5 TAPS-4 Phonological Blending (Ga:PC) |
| 6 Batería III Woodcock-Munoz: Cognitiva (Batería III COG) | 6 TAPS-4 Phonological Deletion (Ga:PC) |
| 7 Bracken Basic Concept Scales-3-R (BBCS-3-R) | 7 TAPS-4 Processing Oral Directions (Gc1:L5:Lc) |
| 8 Bracken Basic Concept Scales-Expressive (BBCS-E) | 8 TAPS-4 Sentence Memory (Gsm:MS) |
| 9 Beery VMI Test of Visual Perception (Beery VMI) | 9 TAPS-4 Syllabic Blending (Ga:PC) |
| 10 Beery VMI Test of Visual-Motor Integration (Beery VMI) | 10 TAPS-4 Word (Pair) Discrimination (Ga:PC) |
| 11 Bracken School Readiness Assessment-3 (BSRA-3) | 11 TAPS-4 Word Memory (Gsm:MS) |
| 12 Bilingual Verbal Ability Test-NU (BVAT-NU) | |
| 13 Cognitive Assessment System-Second Edition (CAS2) | |
| 14 Comprehensive Assessment of Spoken Language - 2 (CASL-2) | |
| 15 Clinical Evaluation of Language Fundamentals-4 (CELF-4) | |
| 16 Clinical Evaluation of Language Fundamentals-5 (CELF-5) | |
| 17 Clinical Evaluation of Language Fundamentals-Preschool-2 (CELF-Prw2) | |
| 18 Child and Adolescent Memory Profile (ChAMP) | |
| 19 Comprehensive Mathematical Abilities Test (CMAT) | |
| 20 Comprehensive Receptive and Expressive Vocabulary Test-2 (CREVT-2) | |
| 21 Comprehensive Receptive and Expressive Vocabulary Test-3 (CREVT-3) | |
| 22 Comprehensive Trail Making Test (CTMT) | |
| 23 Comprehensive Test of Nonverbal Intelligence-2 (CTONI-2) | |
| 24 Comprehensive Test of Phonological Processing-2 (CTOPP-2) | |
| 25 California Verbal Learning Test-3 (CVLT-3) | |
| 26 Diagnostic Achievement Battery-4 (DAB-4) | |
| 27 Diagnostic Achievement Battery-Intermediate (DAB-I) | |
| 28 Differential Abilities Scales-II (DAS-II) | |
| 29 Diagnostic Evaluation of Language Variation-NR (DELV-NR) | |
| 30 Delis-Kaplan Executive Function System (D-KEFS) | |
| 31 Detroit Test of Learning Abilities-5 (DTLA-5) | |
| 32 Developmental Test of Visual Perception-3 (DTVP-3) | |
| 33 Developmental Test of Visual Perception-Adolescent & Adult (DTVP-A) | |
| 34 Dean-Woodcock Neuropsychological Battery (DWNB) | |
| 35 Executive Functions Test-Elementary: Normative Update (EFT-E-NU) | |
| 36 Expressive One-Word Picture Vocabulary Test-4 (EOWPVT-4) | |
| 37 Early Reading Assessment (ERA) | |
| 38 Expressive Vocabulary Test-2 (EVT-2) | |
| 39 Expressive Vocabulary Test-3 (EVT-3) | |
| 40 Feller Assessment of Math (FAM) | |

Updated the Test Database with several new tests including: APST, CVLT-3, DTLA-5, EFT-E-NU, EVT-3, MFVPT-4, PPVT-5, PAT-2:NU, TAPS-4, TVPS-4, TOLD:P-5, TNL-2, WORD-3:E, YCAT-2, WISC-V Spanish, and WRAT-5. There are now 148 tests/batteries and 1,175 subtests classified in X-BASS.

X-BASS v2.3 New Features: Exclusionary Factors Form Tab

Exclusionary Factors

Release: 2.0

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Name: _____ Age: 8 years 0 months Grade: 3 Date: 2/21/2018

WISC-IV WABSI-WPPSI-IV WASI-II WI VI COB WI VI ACH WI VI CLC BAIPI-C ATLAS-C GDS-B DAS-IQ DBI

This form is not saved in the case record. After entering any information, a printed copy should be made for future reference.

Evaluation and Consideration of Exclusionary Factors for SLD Identification

Developed by Jennifer T. Macosko and Dawn P. Flanagan. This form may be copied and disseminated.

An evaluation of specific learning disability (SLD) requires an evaluation and consideration of factors, other than a disorder in one or more basic psychological processes that may be the primary cause of a student's academic skill weaknesses and learning difficulties. These factors include (but are not limited to), vision/hearing, or motor disabilities, intellectual disability (ID), social/emotional or psychological disturbances, environmental or economic disadvantages, cultural and linguistic factors (e.g., limited English proficiency, insufficient instruction or opportunity to learn and physical health factors). These factors may be evaluated via behavior rating scales, parent and teacher interviews, classroom observations, attendance records, social and developmental history, family history, vision/hearing exams, medical records, prior evaluations, and interviews with current or past counselors, psychiatrists, and professionals who have worked with the student. Noteworthy is the fact that students with (and without) SLD often have one or more factors (listed below) that contribute to academic and learning difficulties. However, the practitioner must rule out any of these factors as being the primary reason for a student's academic and learning difficulties to maintain SLD as a viable classification/diagnosis.

Vision (Check All That Apply):

- ☐ Vision test recent (within 1 year)
- ☐ Vision test recent (> 1 year)
- ☐ Passed
- ☐ Failed
- ☐ Wears Glasses

Additional Notes:

Hearing (Check All That Apply):

- ☐ Hearing test recent (within 1 year)
- ☐ Hearing test outdated (> 1 year)
- ☐ Passed
- ☐ Failed
- ☐ Uses Hearing Aids

Additional Notes:

Motor Functioning (Check All That Apply):

- ☐ Fine Motor Delay/Difficulty
- ☐ History of motor disorder

History of visual disorder

☐ Diagnosed visual disorder/disturbance

Specify: _____

Vision difficulties suspected or observed
(e.g., difficulty with far or near point copying, misaligned numbers in written work, squinting or rubbing eyes during visual tasks such as reading, computer)

Simply check off the appropriate boxes, enter any additional information, including notes, and click the Print Form button to print out a completed form that examines and considers all possible exclusionary factors that must be ruled out to diagnose SLD

X-BASS v2.3 New Features: Cognitive-Achievement Relations Tab

[illegible]

This new tab contains a table that provides information regarding the relationship between an academic area (and subskill) to specific areas of cognitive functioning. An explanation of the possible etiology is also provided.

X-BASS v2.3 New Features: Manifestations of Cognitive Weaknesses Tab

Manifestations of Cognitive Weaknesses
Release: 2.3

Conceptualization by D.P. Flanagan, S.O. Ortiz, V.C. Alfonso; Programming by S.O. Ortiz and A.M. Dynda
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Name: _____ Age: 8 years 0 month(s) Grade: 3 Date: 2/1/2018

WISC-V WASI-V WPPSI-IV WASI-IV WIAT-III WIAT-III WIAT-III WIAT-III WIAT-III WIAT-III WIAT-III WIAT-III

Manifestations of Cognitive Weaknesses*

Use the drop down menu to select and scroll to a specific ability domain:

Manifestations of a Fluid Reasoning (Gf) Deficit

| CHC Broad Cognitive Abilities/Neuropsychological Functions | Brief Definition* | General Manifestations of the Cognitive/Neuropsychological Weakness | Specific Manifestations of the Cognitive/Neuropsychological Weakness |
|--|--|---|--|
| Fluid Reasoning (Gf) | <ul style="list-style-type: none"> Novel reasoning and problem solving ability to solve problems that are relatively new or novel Processes are minimally dependent on prior knowledge Involves manipulating rules, abstracting, generalizing, and identifying logical relationships Fluid reasoning is evident in inferential reasoning, concept formation, classification of unfamiliar stimuli, categorization, and extrapolation of reasonable estimates to ambiguous situations (Schneider & McGrew, 2012) Narrow Gf abilities include Induction, General Sequential Reasoning (Deductive), and Quantitative Reasoning | <ul style="list-style-type: none"> Difficulties with: <ul style="list-style-type: none"> Higher level thinking and Reasoning Transferring or generalizing learning Deriving solutions for novel problems Extending knowledge through critical thinking Perceiving and applying underlying rules or processes to solve problems | Reading Difficulties: <ul style="list-style-type: none"> Drawing inferences from text Abstracting main idea(s) Math Difficulties: <ul style="list-style-type: none"> Reasoning with quantitative information (word problems) Internalizing procedures and processes used to solve problems Apprehending relationships between numbers Writing Difficulties: <ul style="list-style-type: none"> Essay writing and generalizing concepts Developing a theme Comparing and contrasting ideas |

Manifestations of a Comprehension-Knowledge (Gc) Deficit

| CHC Broad Cognitive Abilities/Neuropsychological Functions | Brief Definition* | General Manifestations of the Cognitive/Neuropsychological Weakness | Specific Manifestations of the Cognitive/Neuropsychological Weakness |
|--|---|--|---|
| Comprehension Knowledge (Gc) | <ul style="list-style-type: none"> Breadth and depth of knowledge and skills (e.g., words, general information) that are valued by one's culture Developed through language exposure, culture, formal education as well as general learning experiences Stores of information and declarative and procedural knowledge Reflects the degree to which a person has learned practically useful knowledge and mastered skills to comprehend and communicate culturally-valued knowledge (Schneider & McGrew, 2012, 2018) Narrow Gc abilities include General Verbal Information, Language Development, Lexical Knowledge, Listening Ability, Information about Culture, Communication Ability, and Grammatical Knowledge | <ul style="list-style-type: none"> Difficulties with: <ul style="list-style-type: none"> Vocabulary acquisition Knowledge acquisition Comprehending language or understanding what others are saying Fact-based/informational questions Using prior knowledge to support learning Finding the right words to use/say | Reading Difficulties: <ul style="list-style-type: none"> Decoding (e.g., word student is attempting to decode is not in his/her vocabulary) Comprehending (e.g., poor background knowledge about information contained in text) Math Difficulties: <ul style="list-style-type: none"> Understanding math concepts and the "vocabulary of math" Writing Difficulties: <ul style="list-style-type: none"> Grammar (syntax) Bland writing with limited descriptors Verbose writing with limited descriptors Inappropriate word usage Language Difficulties: <ul style="list-style-type: none"> Understanding class lessons Expressive language – "poverty of thought" |

This new tab contains a table that provides a definition of academically-related cognitive abilities as well as their general and specific manifestations in terms of academic functioning and skills acquisition. The table can be quickly navigated by selecting the cognitive domain from the drop down menu at the top.

X-BASS v2.3 New Features: Minimizing Effects of Cognitive Weaknesses Tab

Minimizing Effects of Cognitive Weaknesses
Release: 2.3

Conceptualization by D.P. Flanagan, S.O. Ortiz, V.C. Alfonso; Programming by S.O. Ortiz and A.M. Dynda
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Name: _____ Age: 8 years 0 month(s) Grade: 3 Date: 2/1/2018

WISC-V WASI-V WPPSI-IV WASI-IV WIAT-III WIAT-III WIAT-III WIAT-III WIAT-III WIAT-III WIAT-III WIAT-III

Minimizing the Effects of Cognitive Weaknesses*

Use the drop down menu to select and scroll to a specific ability domain:

Recommendations that May Facilitate Learning and Aid in Minimizing the Effects of a Fluid Reasoning (Gf) Deficit

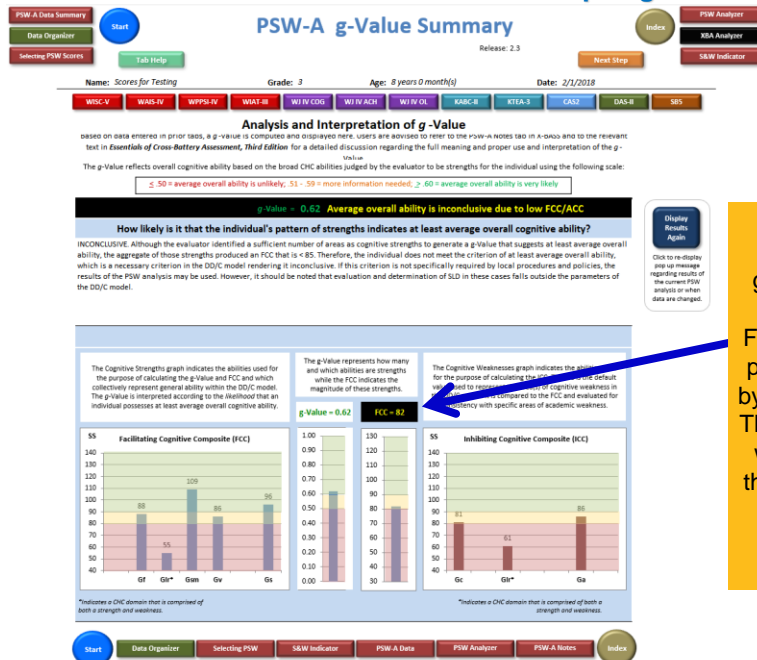
| Classroom Instruction | Instructional Materials | Environmental | Strategies |
|--|--|--|--|
| Use demonstrations to externalize the reasoning process (think alouds) | Expanded answer keys containing the "reason" for correct/incorrect choices | Problem solving charts (hanging or taped to desk) | Use metacognitive strategies (mnemonics that are memorable and that accurately represent the learning task) |
| Gradually offer guided practice (e.g., guided questions list) to promote internalization of procedures or processes | Guided lists for implementing procedures, formulae | Procedural Charts/Lists (hanging or taped to desk) | Use tools that help them categorize objects and concepts to assist in drawing conclusions (e.g., graphic organizers, concept maps) |
| Offer targeted, explicit feedback | Models/examples | Preferred seating arrangements that provide easy access to a peer model with strong reasoning skills (e.g., for cooperative learning activities) | Listen to and separate the "steps" in completing a problem from the actual content used in a problem |
| Offer opportunities for learning formats that allow for reasoning to be modeled for the student (e.g., cooperative learning, reciprocal) | Text features (boldface, italics) | | Teach self-questioning in which students highlight main ideas and relevant details in the text, and then respond to a series of question prompts |
| Compare new concepts to previously learned concepts (same vs. different) | Graphic organizers that allow for a visual depiction of relationships between and among concepts | | Use computer games involving reasoning. Students may benefit from additional opportunities to practice reasoning in a computer or app-based format. |
| Use analogies, similes, metaphors, paired with concrete explanations, to support understanding when presenting tasks (e.g., "we are going to learn our math facts with lightning speed, that means we are going to learn them fast") | Manipulatives to demonstrate relationships (e.g., part to whole relationships) | | Practice nonverbal reasoning problems. Types of problems for reasoning training may include completing a repeated pattern, completing logical sequences, and classifying objects into categories. Students should receive feedback on the accuracy of their responses, and the correct response should be demonstrated for the student if their initial response was |

Recommendations that May Facilitate Learning and Aid in Minimizing the Effects of a Comprehension-Knowledge (Gc) Deficit

| Classroom Instruction | Instructional Materials | Environmental | Strategies |
|---|-----------------------------|--------------------------|---|
| Rephrase instructional questions. If student has difficulty understanding instructional questions as initially presented, use words/phrases you know they are familiar with to facilitate understanding. Once the student understands the task/question, refer back to original phrasing to support expanding fluency/automaticity. | Contains chapter Glossaries | Word-of-the Day Calendar | Use KWL strategy to increase background knowledge |
| Incorporates frequent practice with | Glossaries available | Word Walls | Use context when reading to ascertain meaning |

This new tab contains a table that provides information regarding instructional, environmental, and other strategies for minimizing the effects of cognitive weaknesses which may be helpful in determining appropriate avenues for intervention. The table can be quickly navigated by selecting the cognitive domain from the drop down menu at the top.

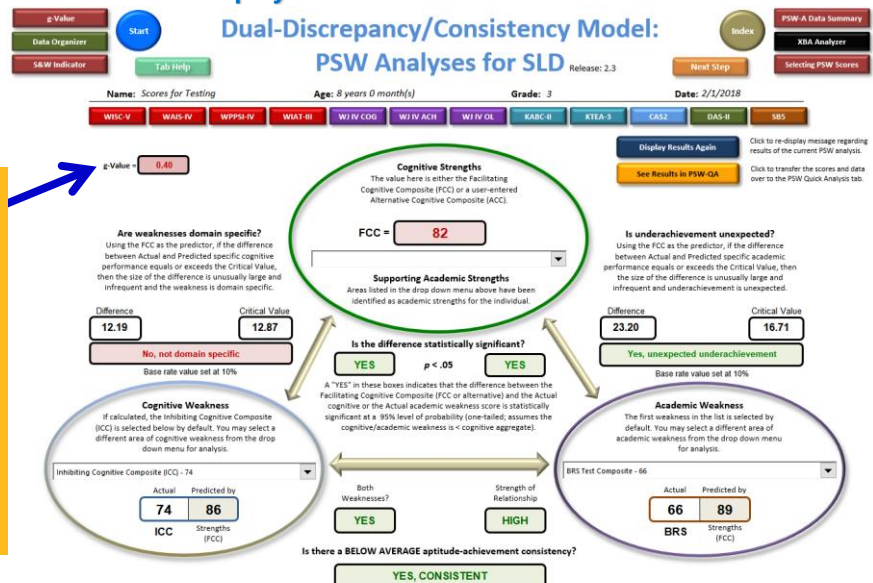
X-BASS v2.3 New Features: Graphing of the FCC on the g-Value Tab



To assist in determining the criterion for overall average general ability, the g-Value tab now provides a graph of the FCC or ACC value in a way that permits consideration in a side-by-side manner with the g-Value. This is especially useful in cases where the g-Value is good but the FCC may be less than 85 or conversely, when the FCC is lower than .51 but the FCC is greater than 85.

X-BASS v2.3 New Features: Display of Full PSW Results in All Cases

In previous versions, no PSW results were displayed if the g-Value was below .51 (except when Gf and Gc were indicated as the only two strengths). Now, the PSW results are displayed regardless of the g-Value as a way of helping practitioners determine where problems in PSW analyses exist.



X-BASS v2.3 New Features: Modifiable ICC for Academic Specific Analysis

| Area of strength below are likely consistent with the individual's overall general ability. | ACHIEVEMENT/SLD DOMAINS | SCORE | Area of weakness below may be used as academic deficits in the DD/C model. |
|--|---|-----------|--|
| Go S | Auditory Processing (Ga) Comp | 92 | |
| | WISC-V Processing Speed Index (Gs) Test Comp | 63 | W Go |
| <p><input type="radio"/> Score difference will be considered rare/inrequent when it occurs 5% of the time (very strict value, best for multiple comparisons or tests with low reliability)</p> <p><input checked="" type="radio"/> Score difference will be considered rare/inrequent when it occurs 10% of the time (default value, best for standard analyses with composites and reliable tests)</p> <p><input type="radio"/> Score difference will be considered rare/inrequent when it occurs 15% of the time (very liberal value, increases false positive rate—not recommended)</p> | | | |
| BRS S | WIAT-III Basic Reading Skills (BRS) Test Comp | 94 | |
| | WIAT-III Reading Comprehension (RC;Gw-RRC) Subtest | 76 | W RDC |
| | WIAT-III Oral Reading Fluency (OR;Gw-RRS) Subtest | 80 | W RDF |
| WE S | WIAT-III Written Expression (WE) Test Comp | 92 | |

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.

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.

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 value produced by your selections.

☐ Gc
☐ Gf
☐ Glr
☐ Gm
☐ Gv
☐ Ga
☐ Gs

☐ WI IV COG Long-Term Retrieval (Glr) Test Comp - 77
☐ Short-Term Memory - XBA Gsm Comp - 78
☐ WISC-V Processing Speed Index (Gs) Test Comp - 63

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

The ICC can now be selectively modified to provide better relevance to the academic areas to which it is being compared. This section allows users to select the abilities that are most related to specific academic skills and set aside those that are not to provide a more accurate analysis of their relationship within PSW.

X-BASS v2.3 New Features: Modifiable ICC for Academic Specific Analysis

| Area of strength below are likely consistent with the individual's overall general ability. | ACHIEVEMENT/SLD DOMAINS | SCORE | Area of weakness below may be used as academic deficits in the DD/C model. |
|--|---|-----------|--|
| Go S | Auditory Processing (Ga) Comp | 92 | |
| | WISC-V Processing Speed Index (Gs) Test Comp | 63 | W Go |
| <p><input type="radio"/> Score difference will be considered rare/inrequent when it occurs 5% of the time (very strict value, best for multiple comparisons or tests with low reliability)</p> <p><input checked="" type="radio"/> Score difference will be considered rare/inrequent when it occurs 10% of the time (default value, best for standard analyses with composites and reliable tests)</p> <p><input type="radio"/> Score difference will be considered rare/inrequent when it occurs 15% of the time (very liberal value, increases false positive rate—not recommended)</p> | | | |
| BRS S | WIAT-III Basic Reading Skills (BRS) Test Comp | 94 | |
| | WIAT-III Reading Comprehension (RC;Gw-RRC) Subtest | 76 | W RDC |
| | WIAT-III Oral Reading Fluency (OR;Gw-RRS) Subtest | 80 | W RDF |
| | WIAT-III Written Expression (WE) Test Comp | 92 | |

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.

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.

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 value produced by your selections.

☐ Gc
☐ Gf
☒ Glr
☒ Gm
☐ Gv
☐ Ga
☐ Gs

☐ WI IV COG Long-Term Retrieval (Glr) Test Comp - 77
☐ Short-Term Memory - XBA Gsm Comp - 78
☐ WISC-V Processing Speed Index (Gs) Test Comp - 63

Academic-specific ICC VALUE = 74 ☐ Check here to use this value

In this case, Glr and Gsm may be related to Reading Comprehension, which means that Gs is attenuating the ICC despite not being related to problems in reading comprehension.

By not checking Gs, the ICC is recalculated using only Glr and Gsm as weaknesses resulting in a new value (SS=74) that represents the effect of memory without the influence of speed.

X-BASS v2.3 New Features: Modifiable ICC for Academic Specific Analysis

| General Summary | | Advanced |
|--|---|---|
| Go | S | Auditory Processing (Ga) Comp 92 |
| WISC-V Processing Speed Index (Gs) Test Comp 63 | | W Gs |
| <p>Score difference will be considered rare/frequent when it occurs 5% of the time (very strict value, best for multiple comparisons or tests with low reliability)</p> <p><input checked="" type="radio"/> Score difference will be considered rare/frequent when it occurs 10% of the time (default value, best for standard analyses with composites and reliable tests)</p> <p>Score difference will be considered rare/frequent when it occurs 15% of the time (very liberal value, increases false positive rate—not recommended)</p> | | <p>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.</p> <p>74 Academic-specific ICC will be used for PSW analysis</p> |
| <p>Areas of strength below are likely consistent with the individual's overall general ability.</p> <p>ACHIEVEMENT/SLD DOMAINS</p> <p>WJAT-II Basic Reading Skills (BR) Test Comp 94</p> | | <p>4. Rarity/Frequency of Difference (JACC) to Cognitive Weakness Select base rate level for determining if a base rate of a difference occurs rarely or infrequently. The default value is 10%. A more conservative liberal value may be selected. If multiple comparisons are made, a stricter value may be appropriate.</p> <p>Composites or subtest scores designated as weaknesses may be used to represent academic deficits in PSW-A analyses (bottom right panel in the DO/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 patterns of strengths and weaknesses on the PSW Analyzer tab.</p> |
| <p>Areas of weakness below may be used as academic deficits in the DO/C model.</p> <p>ADVANCED PSW ANALYSIS Selecting Specific Cognitive Weaknesses for the ICC</p> <p>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 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 Gvms). Individual cognitive weaknesses need not be selected here as they can already be selected individually from the drop-down menu of the bottom right panel 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 value produced by your selections.</p> | | <p>Gc <input type="checkbox"/></p> <p>Gf <input type="checkbox"/></p> <p>Glr <input checked="" type="checkbox"/> WJ IV COG Long-Term Retrieval (Glr) Test Comp - 77</p> <p>Gsm <input type="checkbox"/> Short-Term Memory - XBA Gam Comp - 78</p> <p>Gv <input type="checkbox"/></p> <p>Ga <input type="checkbox"/></p> <p>Gs <input type="checkbox"/> WISC-V Processing Speed Index (Gs) Test Comp - 63</p> |
| <p>Academic-specific ICC VALUE = 74</p> <p><input checked="" type="checkbox"/> Check here to use this value</p> | | |

By checking this box, the new "Academic-specific ICC" value (SS=74) is used in place of the original ICC (SS=63) that was calculated using all weaknesses.

In this way, PSW analysis can be conducted in a more precise manner that examines the relationship of the ICC to both the FCC and academic weakness without the influence of unrelated abilities.

X-BASS v2.3 New Features: Buttons to Auto-Zoom (enlarge and reset) Display

These buttons will zoom all tabs in X-BASS making it easier to read. The reset button will return all tabs to 100%, which is the default and standard view.

Cross-Battery Assessment Software System (X-BASS® v2.3)

Conceptualization by D.P. Flanagan, S.O. Ortiz, V.C. Alfonso; Programming by S.O. Ortiz and A.M. Dynda
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Release: 2.3

Essentials
of Cross-Battery Assessment

X-BASS Online
Cross-Battery Assessment

Intervention Library
Finding interventions, resources, and supports for students with learning difficulties.

ACCESS CARD
Dawn P. Flanagan
Samuel O. Ortiz
Vincent C. Alfonso

COMING SOON! X-BASS Online is still in development but its release date has been delayed. We will make future announcements regarding availability once we have firm information.

NEW: We are anticipating release of an independent Intervention Library program in early Fall. Although it can be informed via use of X-BASS, it will work as a stand alone product that provides help in finding empirically validated interventions for students with learning difficulties. Look for it on sale soon!

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.

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

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

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

User Mode
☐ Beginner
☐ Intermediate
☒ Advanced

Start **Index**

PSW-QA

Zoom 150% **Zoom 125%** **Reset 100%**

NOTE: THIS SOFTWARE IS BEST VIEWED AT A MINIMUM 100% MAGNIFICATION AND WIDE SCREEN RESOLUTIONS. LOWER MAGNIFICATION SETTINGS MAY RESULT IN FORMAT CHANGES AND TEXT THAT IS HIDDEN OR UNREADABLE.

For best results, adjust your window to the same width as the line above.

NOTE: X-BASS does NOT use or calculate subtest raw scores and is NOT a test scoring program. Users of this software are responsible for following all test publishers' administration and scoring guidelines. All scores entered into X-BASS must be derived from use of each test's respective norms and via the specific procedures provided by the respective test publishers. All instructions regarding operation of X-BASS must be reviewed carefully prior to use.

X-BASS v2.2 and v2.3: C-LIM Updates

Culture-Language Interpretive Matrix - Analyzer & Data Entry

Release: 2.3

Start | Index | C-LIM Summary | Statements | Interpretation

WISC-V | WISC-IV | WPPSI-IV | WIAT-III | WI IV COG | WI IV ACH | WI IV OL | KABC-II | KTEA-3 | CAS2 | DAS-II | SBS

Transfer Scores | Clear Unused Tests | Populate C-LIM by selecting battery/test name here, then press enter --> | C-LIM Reference | Clear All Data

Interpretive Guide | Submit Variability? | Culture-Language Interpretive Matrix - Analyzer & Data Entry | C-LIM Level Graph | C-LIM Main Graph

Name: RCT - Modification Example | Age: 9 years 8 month(s) | Date: 5/29/2017

DEGREE OF LINGUISTIC DEMAND

| Cognitive | LOW | | MODERATE | | HIGH | |
|----------------|-----------------|-------|-----------------|-------|------------------|-------|
| | CELL 1: Low/Low | Score | CELL 2: Low/Mod | Score | CELL 3: Low/High | Score |
| LOW | | | | | | |
| MOD | | | | | | |
| HIGH | | | | | | |
| Cell Average = | | | | | | |

Click here to select the core test/battery from the drop down menu list and X-BASS will automatically populate the C-LIM cells with its subtests according to their classifications.

X-BASS v2.2 and v2.3: C-LIM Updates

Culture-Language Interpretive Matrix - Analyzer & Data Entry

Release: 2.3

Start | Index | C-LIM Summary | Statements | Interpretation

WISC-V | WISC-IV | WPPSI-IV | WIAT-III | WI IV COG | WI IV ACH | WI IV OL | KABC-II | KTEA-3 | CAS2 | DAS-II | SBS

Transfer Scores | Clear Unused Tests | Populate C-LIM by selecting battery/test name here, then press enter --> | C-LIM Reference | Clear All Data

Interpretive Guide | Submit Variability? | Culture-Language Interpretive Matrix - Analyzer and Data Entry | C-LIM Level Graph | C-LIM Main Graph

Name: RCT - Modification Example | Age: 9 years 8 month(s) | Grade: 4 | Date: 5/29/2017

DEGREE OF LINGUISTIC DEMAND

| Cognitive | LOW | | MODERATE | | HIGH | |
|----------------|-----------------|-------|-----------------|-------|------------------|-------|
| | CELL 1: Low/Low | Score | CELL 2: Low/Mod | Score | CELL 3: Low/High | Score |
| LOW | | | | | | |
| MOD | | | | | | |
| HIGH | | | | | | |
| Cell Average = | | | | | | |

The C-LIM contains classifications for cognitive, speech-language, neuropsychological, and a few achievement tests that have primary cognitive CHC classifications (e.g., KTEA-3 Associational Fluency). Most achievement tests are not included because they require a different body of research on which to determine EL performance. An Education-Language Interpretive Matrix (E-LIM) is in the works which will provide guidance on EL performance for academic subtests.

X-BASS v2.2 and v2.3: C-LIM Updates

Culture-Language Interpretive Matrix - Analyzer & Data Entry

Release: 2.3

Start | Index | C-LIM Summary | Statements | Interpretation

WISC-V | WAS-IV | WPPSI-IV | WIAT-III | WI IV COG | WI IV ACH | WI IV OL | KABC-II | KTEA-3 | CAS2 | DAS-II | SBS

Transfer Scores | Clear Unused Tests | Populate C-LIM by selecting battery/test name here, then press enter --> | C-LTC Reference | Clear All Data

Interpretation Guide | Submit Variability? | Culture-Language Interpretive Matrix - Analyzer and Data Entry | C-LIM Level Graph | C-LIM Main Graph

Name: ICC - Modification Example | Age: 9 years 8 month(s) | Grade: 4 | Date: 5/28/2017

LOW | HIGH

CELL 1: Low/Low | CELL 3: Low/High | CELL 5: High/High | CELL 6: High/High

CELL 2: High/Low | CELL 4: High/Mid | CELL 7: High/High

CELL 8: Mid/Low | CELL 9: High/High

Cell Average = | Score | Cell Average = | Score | Cell Average = | Score | Cell Average = | Score

Cell Average = | Cell Average = | Cell Average = | Cell Average =

Interpretation of pattern of subtest scores

While visual inspection of the Tiered Graph and Main Culture-Language Graph facilitates evaluation regarding an interpretation of the Tiered Graph?

Would you like to continue your analysis by examining the overall pattern of scores within the Tiered Graph?

Yes No

matrix, simply use the adjacent blue button.

OK

Additional guidance is available to assist in interpreting C-LIM results within the matrix.

X-BASS v2.2 and v2.3: C-LIM Updates

Culture-Language Interpretive Matrix - Analyzer & Data Entry

Release: 2.3

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Transfer Scores | Clear Unused Tests | Populate C-LIM by selecting battery/test name here, then press enter --> | C-LTC Reference | Clear All Data

Interpretation Guide | Submit Variability? | Culture-Language Interpretive Matrix - Analyzer and Data Entry | C-LIM Level Graph | C-LIM Main Graph

Name: ICC - Modification Example | Age: 9 years 8 month(s) | Grade: 4 | Date: 5/28/2017

LOW | HIGH

CELL 1: Low/Low | CELL 3: Low/High | CELL 5: High/High | CELL 6: High/High

CELL 2: High/Low | CELL 4: High/Mid | CELL 7: High/High

CELL 8: Mid/Low | CELL 9: High/High

Cell Average = | Score | Cell Average = | Score | Cell Average = | Score | Cell Average = | Score

Cell Average = | Cell Average = | Cell Average = | Cell Average =

No subtest variability within cells

Continue with variability analysis of Tiered Graph?

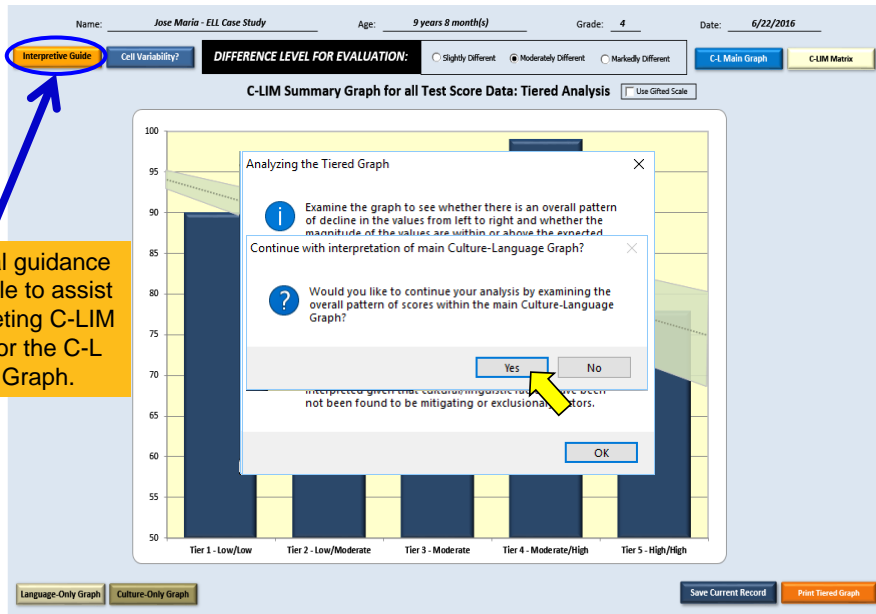
Would you like to continue your review by examining Tier variability (cell aggregate score variability) in the Tiered Graph?

Yes No

OK

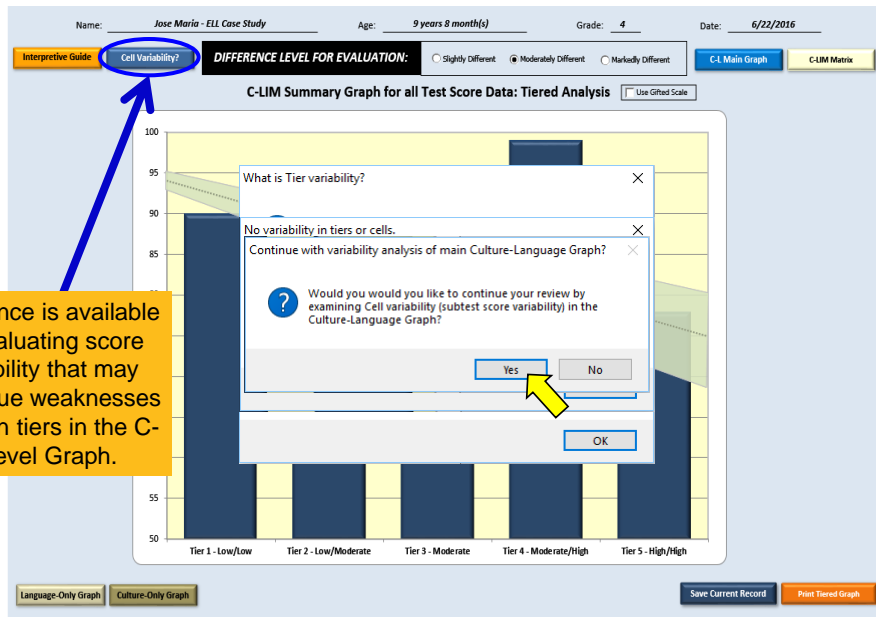
Additional assistance is also available to assist in evaluating score variability that may mask true weaknesses within the cells in the matrix or between tiers in the Tiered Graph.

X-BASS v2.2 and v2.3: C-LIM Updates



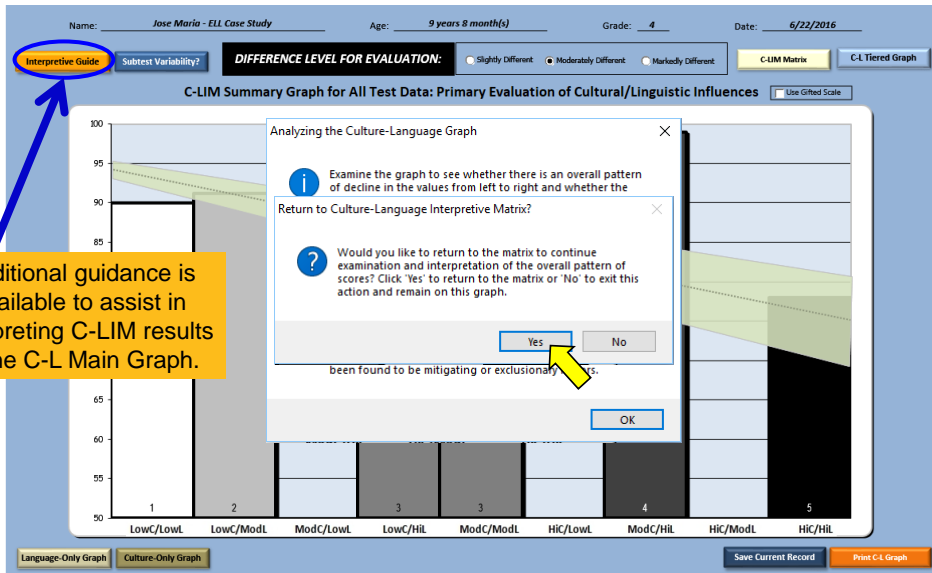
Additional guidance is available to assist in interpreting C-LIM results for the C-L Level Graph.

X-BASS v2.2 and v2.3: C-LIM Updates



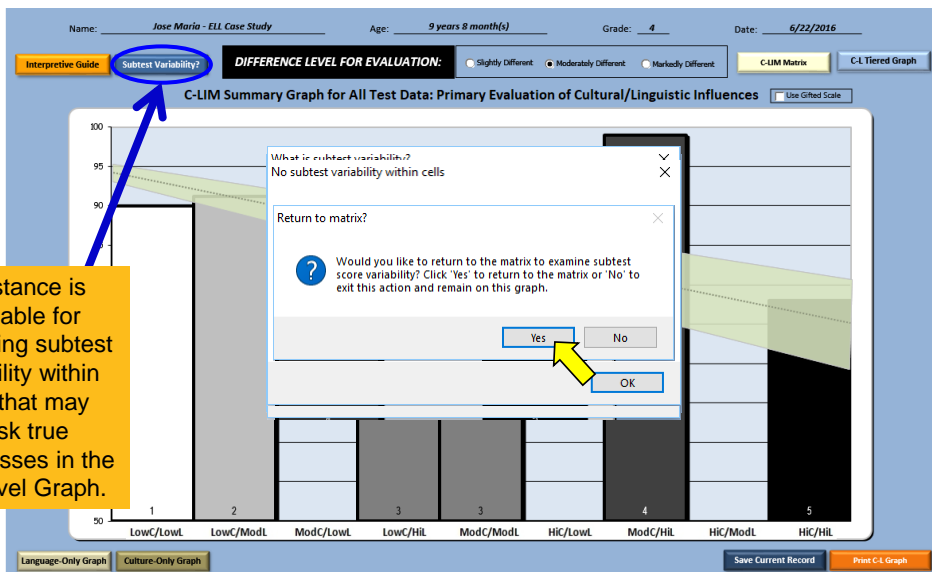
Assistance is available for evaluating score variability that may mask true weaknesses between tiers in the C-L Level Graph.

X-BASS v2.2 and v2.3: C-LIM Updates



Additional guidance is available to assist in interpreting C-LIM results in the C-L Main Graph.

X-BASS v2.2 and v2.3: C-LIM Updates



Assistance is available for evaluating subtest variability within cells that may mask true weaknesses in the C-L Level Graph.

X-BASS v2.2 and v2.3: C-LIM Updates

Statement 1. Evaluations of Suspected Learning Disability - Invalid Results

The following sample validity statement is appropriate for cases where there is an overall declining pattern and the magnitude of the scores are generally within the selected range of difference. In such cases, the effect of culture and language is primary, the results are NOT likely to be valid, and performance suggests average functioning.

Simplified Statement:

Because the student is not a native English speaker, it is necessary to establish the validity of test scores to ensure that they are true estimates of their ability and not the result of limited English proficiency.

The student's test data were entered into the Culture-Language Interpretive Matrix which permitted evaluation of the extent to which the scores were primarily affected by cultural or linguistic factors. A review of the pattern of test scores indicated that performance was consistent with what would be expected of other individuals with similar cultural and linguistic backgrounds. This means that the scores cannot be interpreted as fair estimates of the student's abilities.

However, because the scores were compared to other individuals from research studies who were of average ability and who had not been identified as having a disability, it suggests that the student's performance is also average (possibly higher) and that it is not likely that a learning disability is present in this case. This means that although the student is having difficulties in the classroom, the problems are most likely to be attributable to, and primarily the result of, the normal process of second language and acculturative knowledge acquisition.

Detailed Statement:

Because the student is not a native English speaker, it is necessary to establish the validity of the results obtained from testing to ensure that they are accurate estimates of ability or knowledge and not the manifestation of cultural or linguistic differences. To this end, the student's test data were entered into the Culture-Language Interpretive Matrix which permitted evaluation of the extent to which the scores were primarily affected by cultural or linguistic factors. A review of the pattern of test scores indicated that performance was consistent with what would be expected of other individuals with similar cultural and linguistic backgrounds. This overall, declining pattern suggests that the scores cannot be interpreted as fair estimates of the student's abilities. Rather than lack of actual ability, the test results evaluated the focus of the evaluation. However, given that the observed pattern of test scores was consistent with what would be expected of other individuals with comparable linguistic development and educational experiences, it suggests that the student's performance is also at least average (possibly higher) and that it is not likely that a learning disability is present in this case. This means that although the student is having academic difficulties observed in classroom performance that prompted this evaluation are most likely to be attributable primarily to the normal process of second language and acculturative knowledge acquisition.

In summary, the observed pattern of the student's test results is consistent with performance that is typical of culturally and linguistically diverse individuals of similar backgrounds who are not disabled and possess average general ability or higher. Therefore, it can be reasonably concluded that the test data evaluated with the C-LIM are likely to be invalid due to the presence of overarching cultural and linguistic influences and suggest that the student's test performance can not be used to support the presence of any type of learning disability.

New, simplified validity statements for use with the C-LIM are provided alongside the previous detailed statements. These may be more helpful in explaining procedures, results, and interpretation within written reports in comparison to the more detailed and technical versions.

A Guided Case Study Example of Evaluation of an English Learner for Specific Learning Disability

Evaluation of Maria Ayala
Tests Used: WISC-V, WIAT-III, and WJ IV
DOE: 5/29/2017
DOB: 9/6/2007
Grade: 4

Multilingual Assessment of ELs: Step by Step

Step 1. Test first in English (L2) and evaluate construct validity in all areas in English (exclusion of cultural/linguistic factors)

- If all scores indicate normative strengths ($SS \approx 90$ or higher) when tested in English (L2), scores are valid to the extent that a disability is not likely, thus no further testing is necessary.
- If some scores are normative weaknesses ($SS < \approx 90$) evaluate test score validity in a research-based manner, e.g., via the C-LIM.
- If C-LIM indicates primary influence of language/culture, test scores are likely invalid and indicate average ability in all areas and a disability is not likely, thus no further testing is necessary.
- If C-LIM indicates contributory or minimal influence of language/culture, test scores are likely to be valid and the evaluation should continue.

Step 2. Re-evaluate areas of weakness in native language (L2) to provide additional supporting evidence of validity (cross-linguistic confirmation)

- If data indicate an area is a strength (i.e., average), then original L2 score is invalid, use the L1 score.
- If data indicate an area is still a weakness, then original L2 score is valid, use the L2 score.

Step 3. Further cross-validate L1 and L2 test scores with contextual factors and pre-referral data and academic concerns (ecological validity for disability)

- Use all other case data and information to serve as the context by which to evaluate the test scores and ensure ecological validity to conclusions

SLD Identification with an English Learner: A Case Study

1: Enter all available subtest scores in C-LIM Analyzer to determine validity

2: When likely/possibly valid, transfer data and enter remaining composite scores

3: Use XBA to conduct follow up testing where indicated and as necessary

4: Enter follow up tests and re-evaluate pattern with C-LIM Summary

5: If still likely/possibly valid, evaluate follow up testing results via XBA Analyzer

6: Transfer cohesive composites (and academic subtests) to Data Organizer

7: Identify deficits for native language re-evaluation and compare to original scores

8: Select best scores for PSW Analysis and designate each as strength or weakness

9: Evaluate scores and results from PSW-A Data Summary and PSW Analyzer

10: Use additional data and information to support interpretations and conclusions

C-LIM
procedure for
evaluating
construct
validity.

XBA-specific
procedures for
enhancing
theoretical and
psychometric
validity.

Procedures
for Step 1

SLD Identification with an English Learner: A Case Study

WISC-V/WJ IV/VIAT-III XBA DATA FOR Maria Ayala
DOE: 5/29/2017 DOB: 9/6/2007 Grade: 4

WECHSLER INTELLIGENCE SCALE FOR CHILDREN-V

| | | | | | |
|-----------------------------------|-----------|-------------------------------|-----------|-----------------------------|-----------|
| <i>Verbal Comprehension Index</i> | <i>76</i> | <i>Fluid Reasoning Index</i> | <i>82</i> | <i>Visual-Spatial Index</i> | <i>95</i> |
| Similarities | 5 | Matrix Reasoning | 7 | Block Design | 9 |
| Vocabulary | 6 | Figure Weights | 7 | Visual Puzzles | 9 |
| <i>Working Memory Index</i> | <i>79</i> | <i>Processing Speed Index</i> | <i>94</i> | | |
| Digit Span | 5 | Coding | 9 | | |
| Picture Span | 7 | Symbol Search | 8 | | |

WECHSLER INDIVIDUAL ACHIEVEMENT TEST-III

| | | | | | |
|----------------------|-----------|------------------------------|-----------|---------------------------|-----------|
| <i>Basic Reading</i> | <i>94</i> | <i>Reading Comprehension</i> | <i>76</i> | <i>Written Expression</i> | <i>92</i> |
| Word Reading | 92 | Reading Comprehension | 76 | Spelling | 100 |
| Pseudoword Decoding | 98 | Oral Reading Fluency | 80 | Sentence Composition | 86 |
| | | | | Essay Composition | 93 |

WOODCOCK JOHNSON-IV TESTS OF COGNITIVE ABILITY

| | | | |
|----------------------------|-----------|-----------------------------|-----------|
| <i>Auditory Processing</i> | <i>91</i> | <i>LT Storage/Retrieval</i> | <i>77</i> |
| Phonological Processing | 99 | Story Recall | 79 |
| Nonword Repetition | 84 | Visual-Auditory Learning | 75 |

Start/Data Record Management
Release: 2.3

Guide Index

Tab Help Next Step

WISC-V WAIS-IV WPPSI-IV VIAT-III WJ IV COG WJ IV ACH WJ IV OL KABC-II KTEA-3 CAS2 DAS-II SBS

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 optional informational and confirmational messages. Advanced mode suppresses all except critical messages.

User Mode:
☐ Beginner ☐ Intermediate ☒ Advanced

1. ENTER NAME (if new case)

*Name of Examinee: Maria Ayala - Case Study
 Name of Evaluator: L. Sikologu
 Examinee's Age: 9 years 8 month(s)

2. ENTER DATES/GRADE

*Date of Evaluation: 5/29/2017
 *Date of Birth: 9/6/2007
 *Examinee's Grade: 4

3. CREATE NEW DATA RECORD

Create New Record

Check box if examinee is an English learner (EL) ☒

DATA RECORD IS ACTIVE

OPEN SAVED DATA RECORD

Maria Ayala - Case Study

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.

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

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.

Save Current Record PSW Quick Analysis Export Current Database Import Saved Database Clear Data/Reset Program Delete Record Check for Updates

Enter the required information, create a new case record, and check the ELL box—although entering data in the C-LIM also automatically informs X-BASS that the case involves an ELL.

This program is based on *Essentials of Cross-Battery Assessment* (3rd Edition).
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Start/Data Record Management

Release: 2.3

Tab Help Next Step

WISC-V WAIS-IV WPPSI-IV WIAT-III WI IV COG WI IV ACH WI IV OL KABC-II KTEA-3 CAS2 DAS-II SBS

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

1. ENTER NAME (if new case)

Name of Examiner
Name of Evaluator
Examinee's Name

To OPEN and activate order by first name. On upper right corner of the...

To SAVE or update the...

To RUN a PSW Quick A...

To EXPORT and save it creates a file that can be...

To IMPORT a saved dat...

2. ENTER DATES/GRADE

Continue to C-LIM Index?

A new case record has been created or a saved one has been retrieved from the database. The words 'DATA RECORD IS ACTIVE' should now appear in green. If not, click 'Cancel' and press the 'Create New Record' button again (or if retrieving a saved case, click 'Clear Data/Reset Program' and then reselect the saved case). The next step is to begin entering test scores and since it has been indicated that the examinee is an English learner, you should navigate to the C-LIM Index to begin the process of evaluating the potential adverse influence of cultural and linguistic variables on the test data. If you would you like to continue to the C-LIM Index now, click 'Yes' or if this is a saved case and you wish to navigate elsewhere, click 'No' to go to the Index tab. Click 'Cancel' to stop or end help.

3. CREATE NEW DATA RECORD

Create New Record

Check box if examinee is an English learner (EL) ☒

DATA RECORD IS ACTIVE

OPEN SAVED DATA RECORD

Maria Ayala - Case Study

PSW Quick Analysis

Export Current Database

Import Saved Database

Clear Data/Reset Program

Delete Record

Check for Updates

This program is based on Essentials of Cross-Battery Assessment (3rd Edition).
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If the box is checked, X-BASS will recognize the new case record as an English learner and automatically recommend navigation to the C-LIM.

SLD Identification with an English Learner: A Case Study

Culture-Language Interpretive Matrix - Index

Release: 2.3

Tab Help Next Step

XBA Analyzer C-LIC Reference C-LIM Notes C-LIM Analyzer C-LIM Summary Statements

Name: Maria Ayala - Case Study
 Evaluator: L. Salgado
 Grade: 4
 Age: 9 years 8 month(s)
 Date: 5/29/2017
 DOB: 9/6/2007

WISC-V WAIS-IV WPPSI-IV WIAT-III WI IV COG WI IV ACH WI IV OL KABC-II KTEA-3 CAS2 DAS-II SBS

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 English exposure compared to other ELs, this student's background is best described as:

☐ Slightly Different ☒ Moderately Different ☐ Markedly Different

STEP 2. ENTER SCORES IN C-LIM ANALYZER: C-LIM Analyzer C-LIM Summary

If the present case involves a current or former English learner, it is important to consider the impact that cultural and linguistic variables may have had on test performance. Accordingly, you must begin analysis by entering scores in the C-LIM Analyzer directly, instead of into their respective test tabs. This method accommodates all cases, including those where there are additional cross-battery subtest data for which there is no specific test tab provided. Once on the C-LIM Analyzer tab, click the button corresponding to the name of the core battery for which you have data and the program will automatically populate the tabs with the subtest names in their correct classifications. Now enter all subtest scores for that battery and repeat the process by selecting another button corresponding to the name of another battery for which you have subtest scores. Any scores entered previously into the matrix will be automatically preserved and integrated with the new scores. Once all data are entered, use the results and graphs to determine the impact of cultural and linguistic factors on test performance. If analysis indicates results are likely or possibly valid, subtest data can be transferred automatically by using the "Transfer Scores" button to send them to either their respective battery test tab or the appropriate broad ability domain in the XBA Analyzer. Transferred scores will also appear automatically in the C-LIM Summary. Subtest scores may be entered into the matrix as Scaled Scores (1-19), Standardization IQ scores (40-160), T-scores (20-90) may also be entered but ONLY for the DAS-II subjects. T-scores from any other battery must first be converted before entry into the matrix using the converter at the bottom of the matrix.

STEP 3. EVALUATION AND INTERPRETATION: Interpretation Statements

After entering all subtest scores in the C-LIM Analyzer, the results can be evaluated via the matrix and associated graphs that appear below the matrix on the C-LIM Analyzer tab. It is important to read the C-LIM Notes tab for detailed guidance on determining the extent to which cultural and linguistic factors might have affected the validity of the original subtest scores (via C-LIM Analyzer) or whether later supplemental follow-up subtest scores might have changed the original analysis (via C-LIM Summary). If an evaluation is deemed appropriate, the next step is to transfer the scores obtained index, composite, and cluster scores from the core test set entered into the C-LIM Analyzer and then subsequently transferred in the C-LIM Summary. This is particularly helpful when supplementing a function of supplemental/follow-up evaluation, will appear auto within the matrix using the same primary and secondary graphs to

NOTES ON USE OF NATIVE-LANGUAGE TESTS ON NON-ENGLISH SPEAKING EXAMINEES
 Although some Spanish-language batteries (e.g., Bateria-III and WISC-V Spanish, WISC-IV Spanish) are included in the C-LIM Analyzer, they are provided primarily for the purposes of research and investigation regarding evaluation of test score validity when using native-language tests. In addition, a check box next to the title of the graphs in the C-LIM Analyzer is provided that will automatically re-scale the graph to facilitate analysis for identification of possible gifted or talented ELs. Use of these matrices should be considered EXPERIMENTAL ONLY as there is insufficient research at this time to support an expected pattern of performance for ELs or firmly establish classification of performance for subjects from such batteries. Therefore, it is recommended that matrices based on native language tests or for the purposes of identifying gifted/talented ELs be used for qualitative analysis only and not for guidance or assistance in making diagnostic decisions.

Development and operation of the C-LIM is based on concepts from Essentials of Cross-Battery Assessment (3rd Ed.). Users must read Chapter 5 prior to use.

Most important consideration is determination of student's degree of "difference" regarding language development and acculturative acquisition

SLD Identification with an English Learner: A Case Study

KBA Analyzer

C-LIC Reference

C-LIM Notes

Start

Tab Help

Index

C-LIM Analyzer

C-LIM Summary

Statements

Release: 2.8

Next Step

Name: Mario Ayala - Case Study

Grade: 4

Date: 5/29/2017

Evaluator: L. Skoligo

Age: 9 years 8 month(s)

DOB: 9/6/2007

WISC-V

WAS-IV

WPPSI-IV

WAI-III

WI-R COD

WI-R ACI

WI-R OL

KABC-II

RTA-1

CAS2

DAS-II

SES

STEP 1. DETERMINE DIFFERENCE

Difference?

Proper evaluation of test scores requires a determination regarding the "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 consideration 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 categorized as desired on any tab.

INDICATE DEGREE OF DIFFERENCE HERE:

Compared to typical native English speaker and considering the amount of English exposure compared to other ELs, this student's background is best described as:

☐ Slightly Different ☒ Moderately Different ☐ Markedly Different

STEP 2. ENTER SCORES IN C-LIM ANALYZER:

C-LIM Analyzer

C-LIM Summary

If the present case involves a current or former English Learner, it is important to consider the impact that cultural and linguistic variables may have had on test performance. Accordingly, it is best to begin analysis by entering scores in the C-LIM Analyzer directly, instead of into their respective test tabs. This tool accommodates all cases, including those where there are additional cross-battery subtest data for which there is no specific test tab provided. Once on the C-LIM Analyzer tab, click the button corresponding to the name of the core battery for which you have data and the program will automatically populate the matrix with the subtest names in their correct classifications. Now enter all subtest scores for that battery and repeat the process by selecting another button corresponding to the name of another battery for which you have subtest scores. Any scores entered previously into the matrix will be automatically preserved and integrated with the new scores. Once all data are entered, use the results and graphs to determine the impact of cultural and linguistic factors on test performance. If analysis indicates results are likely or possibly valid, subtest data can be transferred automatically by using the "Transfer Scores" button to send them to either their respective core battery test tab or the appropriate broad ability domains in the KBA Analyzer. Transferred scores will also appear automatically in the C-LIM Summary. Subtest scores may be entered into the matrix as Scaled Scores (1-19) or deviation IQ scores (60-160). T-scores (50-90) may also be entered but ONLY for the DAS-II subtests. T-scores from any other battery must first be converted before entry into the matrix using the converter at the bottom of the matrix.

STEP 3. EVALUATION AND INTERPRETATION:

Interpretation

Statements

After entering all subtest scores in the C-LIM Analyzer, the results can be evaluated via the matrix and associated graphs that appear below the matrix on the C-LIM Analyzer tab. It is important to read the C-LIM Notes tab for detailed guidance on determining the extent to which cultural and linguistic factors might have affected the results. If the results of the analysis indicate that the examinee's scores are likely or possibly valid, the next step is to transfer the obtained index, composite, and cluster scores from the case entered into the C-LIM Analyzer and then subsequently transfer them into the C-LIM Summary. This is particularly helpful when using a function of supplemental/follow-up evaluation, will appear within the matrix using the same primary and secondary groupings.

***NOTES ON USE OF NATIVE-LANGUAGE TESTS OR GIFTED IDENTIFICATION:**

Although some Spanish-language batteries (e.g., Baterías III and WISC-IV Spanish, WISC-IV Spanish) are included in the C-LIM Analyzer, they are provided primarily for the purposes of research and investigation regarding evaluation of test score validity when using native-language tests. In addition, a check box next to the title of the graphs in the C-LIM Analyzer is provided that will automatically re-scale the graph to facilitate analysis for identification of possible gifted or talented ELs. Use of these matrices should be considered EXPERIMENTAL ONLY as there is insufficient research at this time to support an expected pattern of performance for ELs or firmly establish classification of performance for subtests from such batteries. Therefore, it is recommended that matrices based on native-language tests or for the purposes of identifying gifted/talented ELs be used for qualitative analysis only and not for guidance or assistance in making diagnostic decisions.

Development and operation of the C-LIM is based on concepts from Essentials of Cross-Battery Assessment (3rd Ed.). Users must read Chapter 5 prior to use.

For assistance in determining examinee's degree of "difference" regarding language development and acculturative acquisition, click this button.

SLD Identification with an English Learner: A Case Study

Instructions for Use and Interpretation

General: The program is comprised of several tabs that correspond to individual test batteries including popular intelligence and cognitive abilities, neuropsychological, and speech-language tests. To use the C-LIM, simply identify the main battery used in your assessment and click on the tab corresponding to that battery. You will be taken to the test-specific matrix for the core battery you select where you will see the subtests from the battery in their proper classifications within the matrix. Each cell within the matrix, space permitting, allows for entry of additional data from other tests that may have been utilized in the evaluation. It will be important to know the exact location of each subtest not listed in the matrix so that it can be found easily via the drop down menu. Any and all subtests belonging to a particular cell classification (e.g., Low Language/Low Culture) will appear in the drop down menu of the corresponding cells in the matrix. The test-specific matrices are available in the book and in Appendix I and can be found in the specific classification/location of any given subtest. Any demographic information entered on the Index page will be carried over to the test tabs automatically.

Step 1. DIFFERENCE: To properly evaluate the influence of cultural and linguistic test variables on test performance, users must indicate the degree of "difference" for the individual being evaluated. In general, the greater the "difference," the greater the adverse effect on performance. Therefore, it is important to make this determination as accurately as possible and to use it as the appropriate basis on which to evaluate the impact on test scores. The determination is based primarily on the degree of "difference" the examinee exhibits in terms of the relative exposure to and opportunity for acculturative learning as well as potential differences in developmental language proficiency in English, as compared to the test's normative sample. To assist in making this determination, the following guidelines are offered as a framework for consideration of the relevant variables. At this time, the decision regarding degree of "difference" remains subject to clinical judgment and the considerations provided below should NOT be considered a checklist of any kind or as an exhaustive list regarding factors that may merit consideration of the determination of 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 instruction in English only, is likely third generation or later (was born in U.S. and parents also born in 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 and 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 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 five 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 as 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.

C-LIM Index C-LIM Analyzer C-LIM Summary

In short, 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.

Follow the guidelines and then navigate to C-LIM Analyzer (or back to Index) to make your selection.

SLD Identification with an English Learner: A Case Study

Culture-Language Interpretive Matrix - Analyzer & Data Entry

Release: 2.3

WISC-V WIAS-IV WPPSI-IV WAT-III WI-IV COG WI-IV ACH WI-IV OL KABC-II KTEA-3 CAS2 DAS-II SB5

Transfer Scores Clear Unused Tests Populate C-LIM by selecting battery/test name here, then press enter →

Interpretive Guide Submit Variability? Culture-Language Interpretive Matrix - Analyzer & Data Entry C-LIM Level Graph C-LIM Main Graph

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Date: 5/29/2017

DEGREE OF LINGUISTIC DEMAND

LOW MODERATE HIGH

CELL 1: Low/Lowt Score CELL 2: Low/Modt Score CELL 3: Low/Hi Score CELL 4: Mod/Lowt Score CELL 5: Mod/Modt Score CELL 6: Mod/Hi Score CELL 7: High/Lowt Score CELL 8: High/Modt Score CELL 9: High/Hi Score

CELL Averages

Click here to select the core battery from the drop down menu list and X-BASS will automatically populate the C-LIM cells with its subtests according to their classifications.

SLD Identification with an English Learner: A Case Study

Culture-Language Interpretive Matrix - Analyzer & Data Entry

Release: 2.3

WISC-V WIAS-IV WPPSI-IV WAT-III WI-IV COG WI-IV ACH WI-IV OL KABC-II KTEA-3 CAS2 DAS-II SB5

Transfer Scores Clear Unused Tests Populate C-LIM by selecting battery/test name here, then press enter → WISC-V

Interpretive Guide Submit Variability? Culture-Language Interpretive Matrix - Analyzer and Data Entry C-LIM Level Graph C-LIM Main Graph

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

DEGREE OF LINGUISTIC DEMAND

LOW MODERATE HIGH

CELL 1: Low/Lowt Score CELL 2: Low/Modt Score CELL 3: Low/Hi Score CELL 4: Mod/Lowt Score CELL 5: Mod/Modt Score CELL 6: Mod/Hi Score CELL 7: High/Lowt Score CELL 8: High/Modt Score CELL 9: High/Hi Score

CELL Averages

Once the subtests are populated, enter all subtest scores for the main battery (remember, cognitive subtests only).

SLD Identification with an English Learner: A Case Study

Culture-Language Interpretive Matrix - Analyzer & Data Entry
Release: 2.3

Start Index C-LIM Summary
C-LIM Notes Statements
XBA Analyzer Tab Help Interpretation

WISC-V WAS-IV WPPSI-IV WIAT-III WI IV COG WI IV ACH WI IV OL KABC-II KTEA-3 CAS2 DAS-II SB5

Transfer Scores Clear Unused Tests Populate C-LIM by selecting battery/test name here, then press enter → WI IV COG CLIC Reference Clear All Data

Interpretive Guide Submit Variability? Culture-Language Interpretive Matrix - Analyzer

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Date: 5/28/2017

DEGREE OF LINGUISTIC DEMAND

| LOW | MODERATE | HIGH |
|--------------------------------|---------------------------------------|----------------------------------|
| CELL 1: Low/Low/Low | CELL 2: Low/Moderate | CELL 3: Low/High |
| 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 Backward |
| WISC-V Cancellation Structured | WISC-V Block Design Partial Score | WISC-V Digit Span Forward |
| WISC-V Matrix Reasoning | WISC-V Coding | WISC-V Information |
| WISC-V Visual Puzzles | WISC-V Delayed Symbol Translation | WISC-V Matrix Reasoning |
| | WISC-V Digit Span Backward | WISC-V Naming Speed |
| | WISC-V Immediate Symbol Translation | WISC-V Similarities |
| | WISC-V Picture Span | WISC-V Vocabulary |
| | WISC-V Recognition Symbol Translation | |
| | WISC-V Symbol Search | |
| CELL 4: Mod/Low/Low | CELL 5: Mod/Moderate | CELL 6: Mod/High |
| WISC-V Picture Concepts | WISC-V Arithmetic | WISC-V Information |
| | WISC-V Figure Weights | WISC-V Naming Speed Color-Object |
| | WISC-V Naming Speed Letter-Number | WISC-V Similarities |
| | | WISC-V Vocabulary |
| CELL 7: High/Low/Low | CELL 8: High/Moderate | CELL 9: High/High |
| | | WISC-V Information |
| | | WISC-V Naming Speed Color-Object |
| | | WISC-V Similarities |
| | | WISC-V Vocabulary |

Cell Average = 90 Cell Average = 91 Cell Average = 75

Cell Average = 85 Cell Average = 88 Cell Average = 78

Repeat the process by selecting each battery for which you have cognitive test scores. Any subtests without scores are automatically removed when the next subtests are populated.

SLD Identification with an English Learner: A Case Study

Culture-Language Interpretive Matrix - Analyzer & Data Entry
Release: 2.3

Start Index C-LIM Summary
C-LIM Notes Statements
XBA Analyzer Tab Help Interpretation

WISC-V WAS-IV WPPSI-IV WIAT-III WI IV COG WI IV ACH WI IV OL KABC-II KTEA-3 CAS2 DAS-II SB5

Transfer Scores Clear Unused Tests Populate C-LIM by selecting battery/test name here, then press enter → WI IV COG CLIC Reference Clear All Data

Interpretive Guide Submit Variability? Culture-Language Interpretive Matrix - Analyzer and Data Entry

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/28/2017

DEGREE OF LINGUISTIC DEMAND

| LOW | MODERATE | HIGH |
|-----------------------------------|------------------------------------|----------------------------------|
| CELL 1: Low/Low/Low | CELL 2: Low/Moderate | CELL 3: Low/High |
| WISC-V Matrix Reasoning | WISC-V Block Design | WISC-V Digit Span |
| WISC-V Visual Puzzles | WISC-V Coding | WISC-V Digit Span Backward |
| WI IV COG Number Series | WISC-V Picture Span | WISC-V Digit Span Forward |
| WI IV COG Number-Pattern Matching | WISC-V Symbol Search | WISC-V Information |
| WI IV COG Pair Cancellation | WISC-V Symbol Translation | WISC-V Matrix Reasoning |
| WI IV COG Visualization | WISC-V Symbol Search | WISC-V Naming Speed |
| | WISC-V Symbol Search | WISC-V Similarities |
| | WISC-V Symbol Search | WISC-V Vocabulary |
| CELL 4: Mod/Low/Low | CELL 5: Mod/Moderate | CELL 6: Mod/High |
| WI IV COG Letter-Pattern Matching | WISC-V Figure Weights | WISC-V Information |
| WI IV COG Picture Recognition | WI IV COG Nonword Repetition | WISC-V Naming Speed Color-Object |
| | WI IV COG Visual-Auditory Learning | WISC-V Similarities |
| | | WISC-V Vocabulary |
| CELL 7: High/Low/Low | CELL 8: High/Moderate | CELL 9: High/High |
| | | WISC-V Information |
| | | WISC-V Naming Speed Color-Object |
| | | WISC-V Similarities |
| | | WISC-V Vocabulary |

Cell Average = 90 Cell Average = 91 Cell Average = 75

Cell Average = 85 Cell Average = 88 Cell Average = 78

The supplemental scores from the WI IV are now entered into the matrix also.

SLD Identification with an English Learner: A Case Study

Culture-Language Interpretive Matrix - Analyzer & Data Entry
Release: 2.3

Start | Index | C-LIM Summary | Statements | Interpretation

WISC-V | WAS-IV | WPPSI-IV | WIAT-III | WI IV COG | WI IV ACH | WI IV OL | KABC-II | KTEA-3 | CAS2 | DAS-II | SB5

Transfer Scores | **Clear Unused Tests** | Populate C-LIM by selecting battery/test name here, then press enter --> | 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: María Ayala - Case Study | Age: 9 years 8 month(s) | Grade: 4 | Date: 5/29/2017

| LOW | | MODERATE | | HIGH | |
|-----------------------------------|-------|------------------------------------|-------|------------------------------------|-------|
| CELL 1: LowC/LowL | Score | CELL 2: LowC/Moderate | Score | CELL 3: LowC/HighL | Score |
| WISC-V Matrix Reasoning | 7 | WISC-V Block Design | 9 | WISC-V Digit Span | 5 |
| WISC-V Visual Puzzles | 9 | WISC-V Coding | 9 | WJ IV COG Concept Formation | |
| WJ IV COG Number Series | | WISC-V Picture Span | 7 | WJ IV COG Object-Number Sequencing | |
| WJ IV COG Number-Pattern Matching | | WISC-V Symbol Search | 8 | | |
| WJ IV COG Pair Cancellation | | WJ IV COG Analysis-Synthesis | | | |
| WJ IV COG Visualization | | WJ IV COG Numbers Reversed | | | |
| Cell Average = 90 | | Cell Average = 91 | | Cell Average = 75 | |
| CELL 4: ModC/LowL | Score | CELL 5: ModC/Moderate | Score | CELL 6: ModC/HighL | Score |
| WJ IV COG Letter-Pattern Matching | | WISC-V Figure Weights | 7 | WJ IV COG Memory for Words | |
| WJ IV COG Picture Recognition | | WJ IV COG Nonword Repetition | 84 | WJ IV COG Phonological Processing | 99 |
| | | WJ IV COG Visual-Auditory Learning | 75 | WJ IV COG Verbal Attention | |
| Cell Average = 90 | | Cell Average = 81 | | Cell Average = 99 | |
| CELL 7: HighC/LowL | Score | CELL 8: HighC/Moderate | Score | CELL 9: HighC/HighL | Score |
| | | WISC-V Similarities | 5 | WISC-V Vocabulary | 6 |
| | | WJ IV COG General Information | | WJ IV COG Oral Vocabulary | 79 |
| | | WJ IV COG Story Recall | | | |
| Cell Average = 90 | | Cell Average = 81 | | Cell Average = 78 | |

After all scores have been entered, click "Clear Unused Tests" button to eliminate visual clutter from subtests for which no score was entered.

SLD Identification with an English Learner: A Case Study

Culture-Language Interpretive Matrix - Analyzer & Data Entry
Release: 2.3

Start | Index | C-LIM Summary | Statements | Interpretation

WISC-V | WAS-IV | WPPSI-IV | WIAT-III | WI IV COG | WI IV ACH | WI IV OL | KABC-II | KTEA-3 | CAS2 | DAS-II | SB5

Transfer Scores | **Clear Unused Tests** | Populate C-LIM by selecting battery/test name here, then press enter --> | 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: María Ayala - Case Study | Age: 9 years 8 month(s) | Grade: 4 | Date: 5/29/2017

| LOW | | MODERATE | | HIGH | |
|-----------------------------------|-------|------------------------------------|-------|------------------------------------|-------|
| CELL 1: LowC/LowL | Score | CELL 2: LowC/Moderate | Score | CELL 3: LowC/HighL | Score |
| WISC-V Matrix Reasoning | 7 | WISC-V Block Design | 9 | WISC-V Digit Span | 5 |
| WISC-V Visual Puzzles | 9 | WISC-V Coding | 9 | WJ IV COG Concept Formation | |
| WJ IV COG Number Series | | WISC-V Picture Span | 7 | WJ IV COG Object-Number Sequencing | |
| WJ IV COG Number-Pattern Matching | | WISC-V Symbol Search | 8 | | |
| WJ IV COG Pair Cancellation | | WJ IV COG Analysis-Synthesis | | | |
| WJ IV COG Visualization | | WJ IV COG Numbers Reversed | | | |
| Cell Average = 90 | | Cell Average = 91 | | Cell Average = 75 | |
| CELL 4: ModC/LowL | Score | CELL 5: ModC/Moderate | Score | CELL 6: ModC/HighL | Score |
| WJ IV COG Letter-Pattern Matching | | WISC-V Figure Weights | 7 | WJ IV COG Memory for Words | |
| WJ IV COG Picture Recognition | | WJ IV COG Nonword Repetition | 84 | WJ IV COG Phonological Processing | 99 |
| | | WJ IV COG Visual-Auditory Learning | 75 | WJ IV COG Verbal Attention | |
| Cell Average = 90 | | Cell Average = 81 | | Cell Average = 99 | |
| CELL 7: HighC/LowL | Score | CELL 8: HighC/Moderate | Score | CELL 9: HighC/HighL | Score |
| | | WISC-V Similarities | 5 | WISC-V Vocabulary | 6 |
| | | WJ IV COG General Information | | WJ IV COG Oral Vocabulary | 79 |
| | | WJ IV COG Story Recall | | | |
| Cell Average = 90 | | Cell Average = 81 | | Cell Average = 78 | |

C-LIM is used to interpret pattern of test scores with respect to whether they were primarily influenced by cultural/linguistic factors (likely invalid) or not (likely valid)

SLD Identification with an English Learner: A Case Study

Culture-Language Interpretive Matrix - Analyzer & Data Entry
Release: 2.3

Buttons: C-LIM Index, C-LIM Notes, XBA Analyzer, Start, Tab Help, Index, C-LIM Summary, Statements, Interpretation, Next Step

Buttons: WISC-V, WAS-IV, WPPSI-IV, WIAT-III, WI IV COG, WI IV ACH, WI IV OL, KABC-II, KTEA-3, CAS-2, DAS-II, SBIS

Buttons: Transfer Scores, Clear Unused Tests, Populate C-LIM by selecting battery/test name here, then press enter --> WJ IV COG, C-LET Reference, Clear All Data

Buttons: Interpretive Guide, Submit Variability?, Culture-Language Interpretive Matrix - Analyzer and Data Entry, C-LIM Level Graph, C-LIM Main Graph

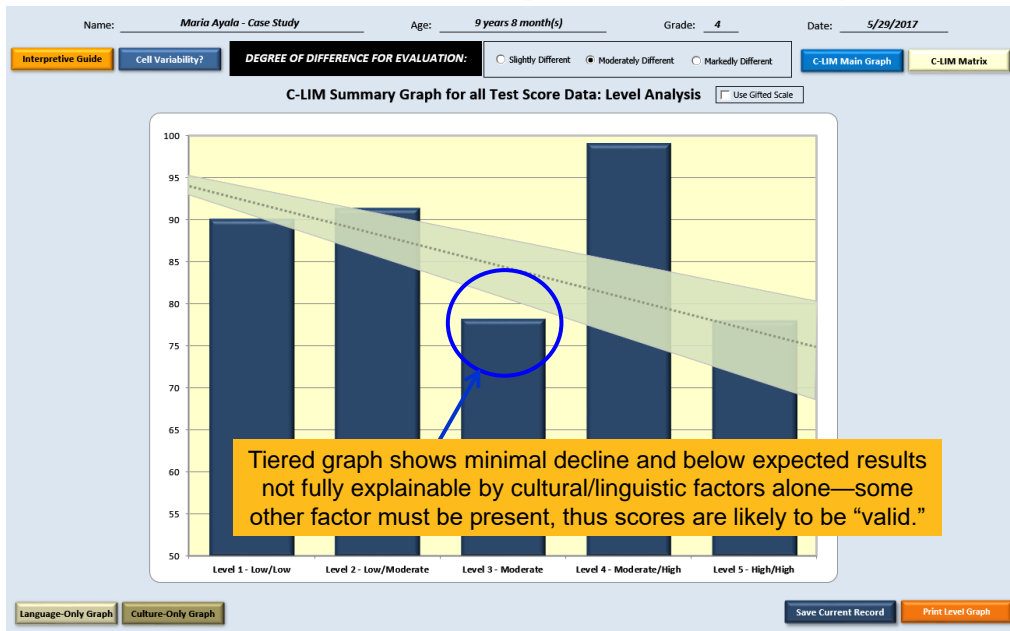
Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

DEGREE OF LINGUISTIC DEMAND

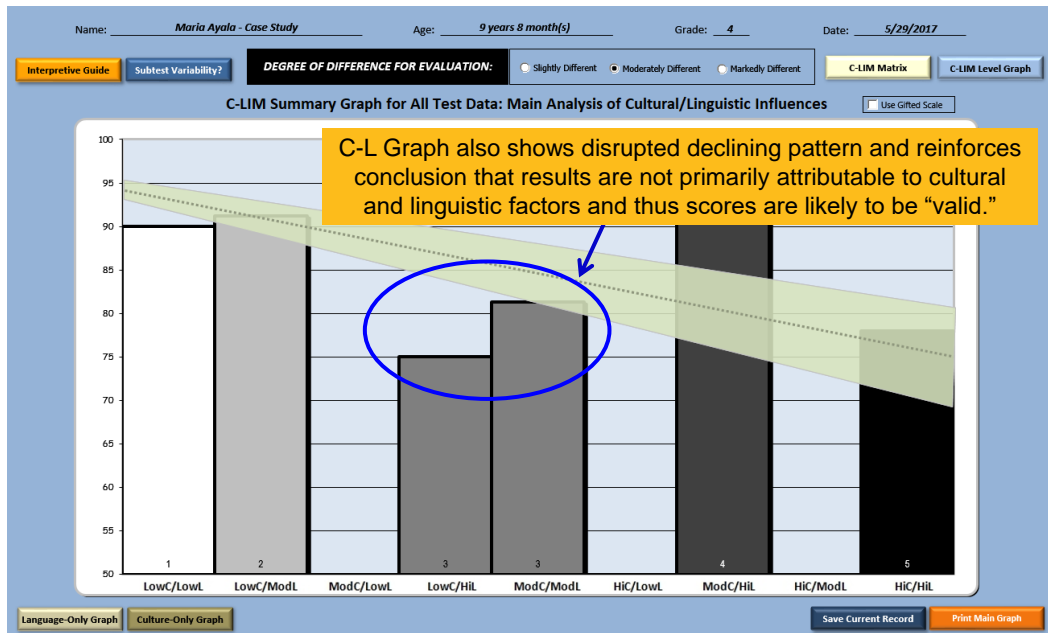
| | LOW | | MODERATE | | HIGH | |
|------------------------------------|-----------------|-------|-----------------------------------|-------|---------------------|-------|
| | CELL 1: Low/Low | Score | CELL 2: Low/Moderate | Score | CELL 3: Low/High | Score |
| WISC-V Matrix Reasoning | 7 | 85 | WISC-V Block Design | 9 | WISC-V Digit Span | 5 |
| WISC-V Visual Puzzles | 9 | 85 | WISC-V Coding | 9 | WISC-V Picture Span | 7 |
| | | | WISC-V Symbol Search | 8 | | |
| Cell Average = | 90 | | Cell Average = | 91 | Cell Average = | 75 |
| | | | CELL 5: Mod/Moderate | Score | CELL 6: Mod/High | Score |
| WISC-V Figure Weights | 7 | 85 | WJ IV COG Phonological Processing | 39 | | |
| WJ IV COG Nonword Repetition | 84 | 88 | | | | |
| WJ IV COG Visual-Auditory Learning | 75 | 75 | | | | |
| Cell Average = | 81 | | Cell Average = | 99 | | |
| | | | CELL 7: High/High | Score | | |
| WISC-V Similarities | 5 | 75 | | | | |
| WISC-V Vocabulary | 8 | 88 | | | | |
| WJ IV COG Story Recall | 79 | 75 | | | | |
| Cell Average = | 78 | | | | | |

Use the buttons provided to move to graphs for further inspection and analysis. Begin with the C-L Tiered Graph.

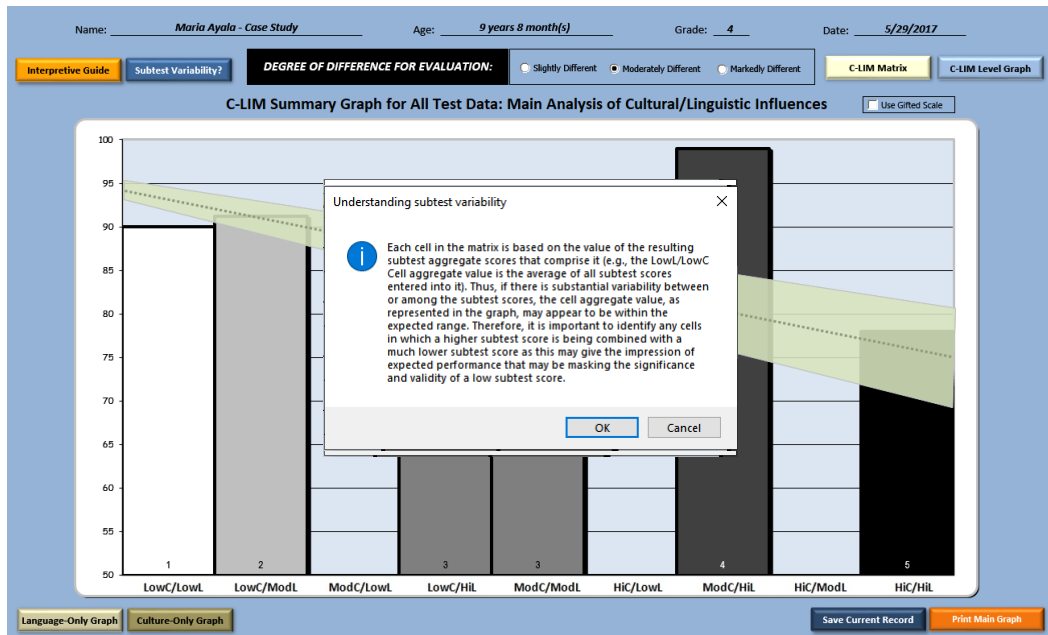
SLD Identification with an English Learner: A Case Study



SLD Identification with an English Learner: A Case Study

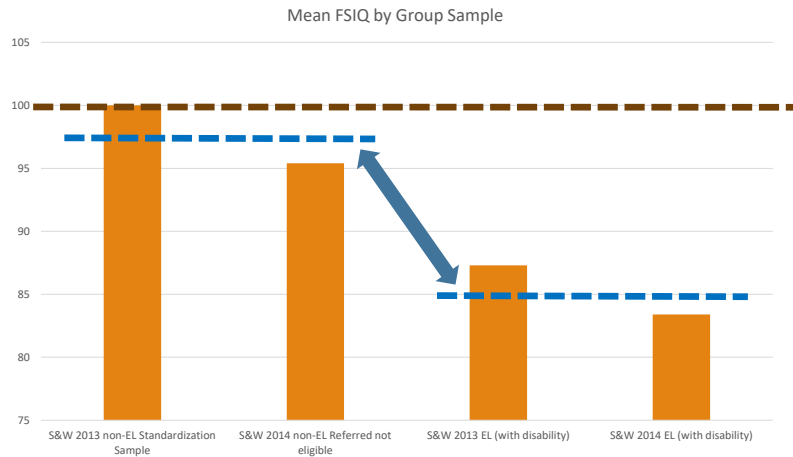


SLD Identification with an English Learner: A Case Study



Research Foundations for EL Evaluation

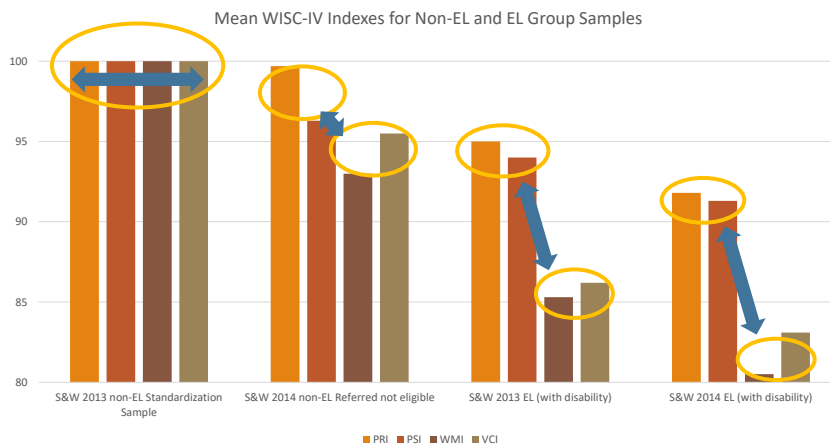
ELs and non-EL's perform differently: Broad ability level



Styck, K. M. & Watkins, M. W. (2013). Diagnostic Utility of the Culture-Language Interpretive Matrix for the Wechsler Intelligence Scales for Children—Fourth Edition Among Referred Students. *School Psychology Review*, 42(4), 367-382.

Research Foundations for EL Evaluation

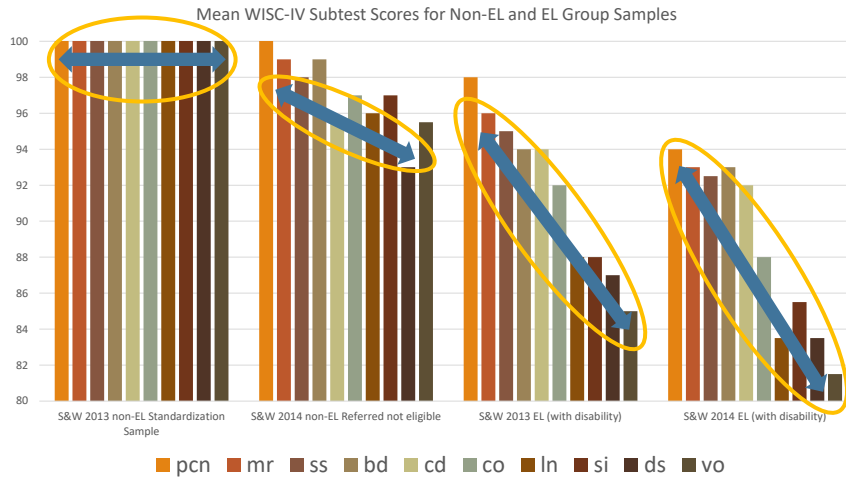
ELs and non-EL's perform differently: Index level



Styck, K. M. & Watkins, M. W. (2013). Diagnostic Utility of the Culture-Language Interpretive Matrix for the Wechsler Intelligence Scales for Children—Fourth Edition Among Referred Students. *School Psychology Review*, 42(4), 367-382.

Research Foundations for EL Evaluation

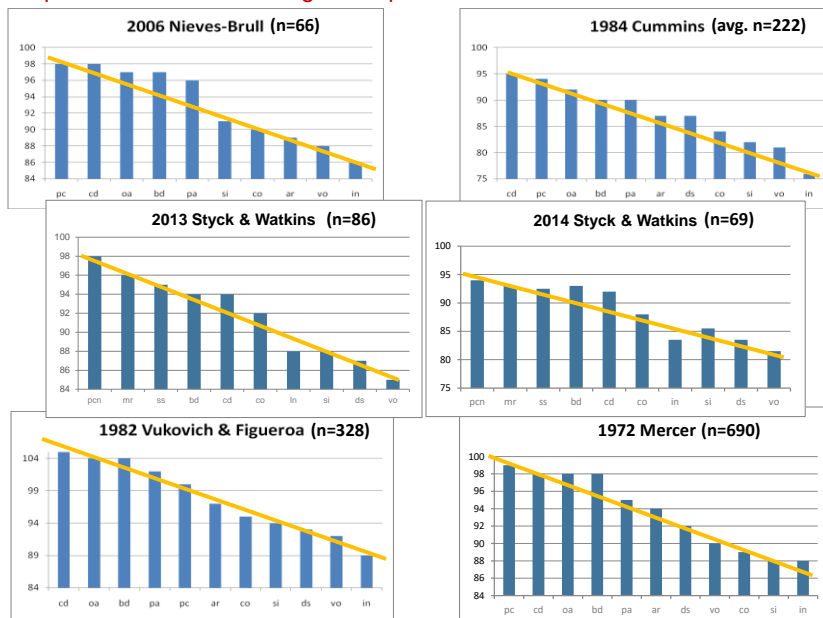
ELs and non-EL's perform differently: Subtest level



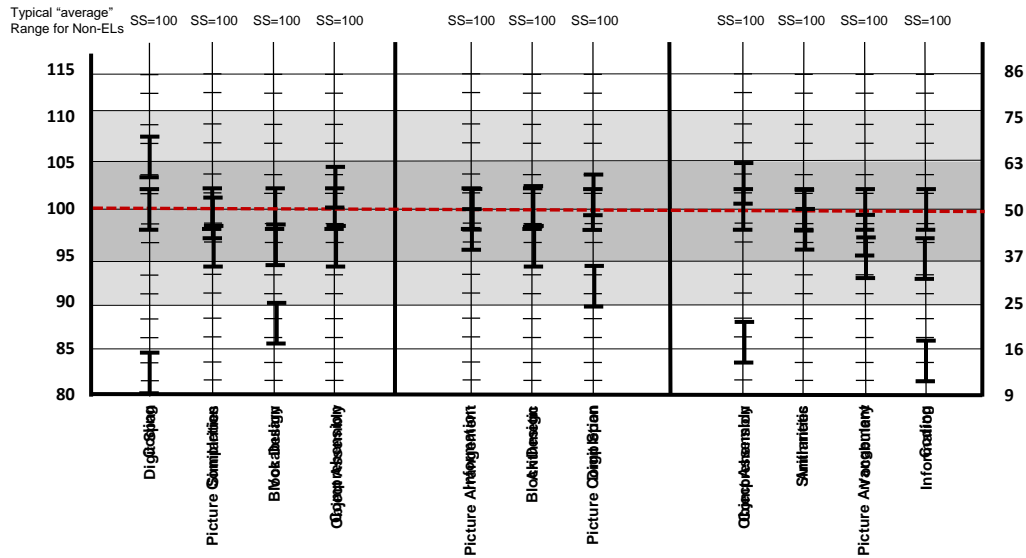
Styck, K. M. & Watkins, M. W. (2013). Diagnostic Utility of the Culture-Language Interpretive Matrix for the Wechsler Intelligence Scales for Children—Fourth Edition Among Referred Students. *School Psychology Review, 42*(4), 367-382.

Research Foundations for EL Evaluation: EL to ES

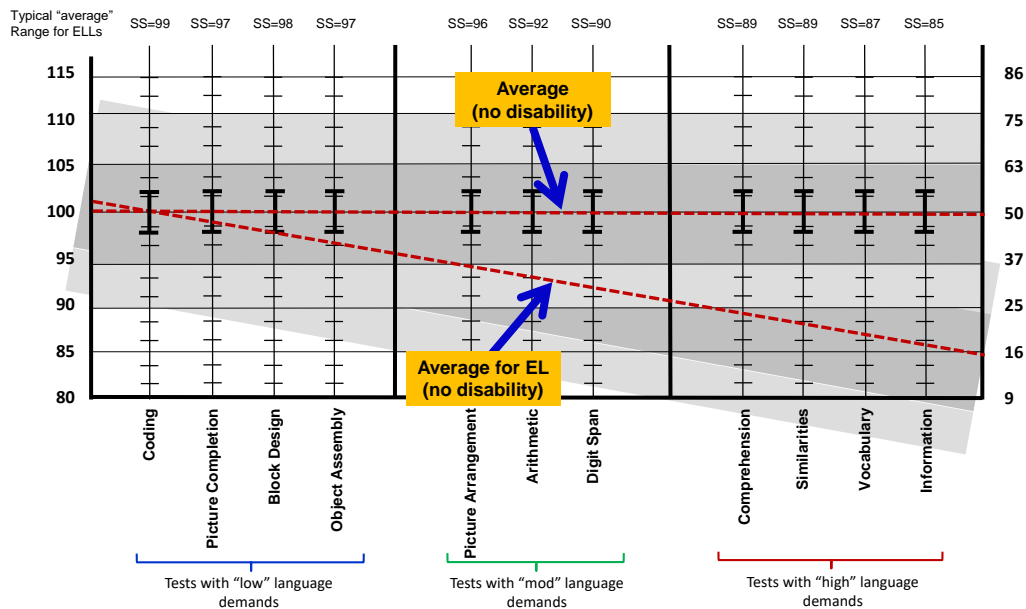
Comparison of overall "average" test performance at the subtest level: EL to ES



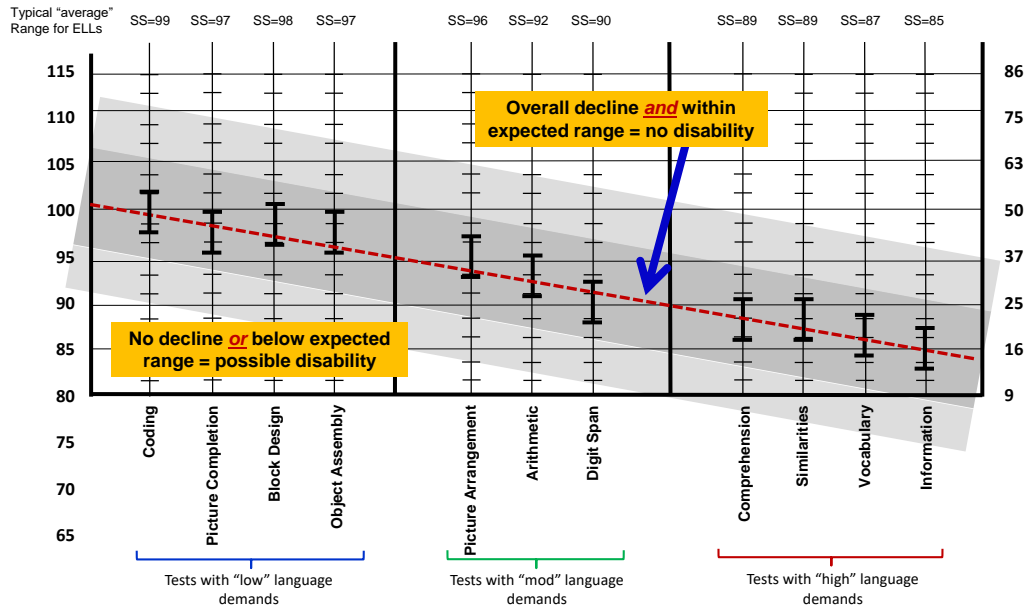
Fairness in Determining “Average” Performance: ES to ES



Fairness in Determining “Average” Performance: EL to ES



Fairness in Determining “Average” Performance: EL to ES



Interpretive Errors in C-LIM Studies: Styck & Watkins

| | | EL Sample (with disability) | Norm Sample (no disability) |
|--|---------------------------|--------------------------------|-----------------------------|
| WISC-IV C-LIM Analysis Overall decline <i>and</i> within expected range = no disability No decline <i>or</i> below expected range = possible disability | Invalid Scores (decline) | N=9 (N=6, 7.0%) (N=3, 3.5%) | N = 100 (4.9%) |
| | Valid Scores (no decline) | N = 77 (89.5%) | N = 1,933 (95.1%) |

The authors noted that “roughly 97% of ($n = 83$) of participants were identified as meeting criteria for an educational disability (86% as SLD)” (p. 371). Yet, only 9 ELL cases (10.5%) resulted in invalid scores (no disability). Thus, the C-LIM suggested invalid scores in 9 cases, 3 of which were likely correct (those without disabilities) so that the C-LIM was consistent with and supported the placement decision of the child by the district in 93% of the cases (89.5% + 3.5%). Moreover, the results of analyses with the WISC-IV normative sample show that declines relative to language are unusual, perhaps even indications of potential SLI in monolingual, native English speakers as described by Cormier et al. (2014).

To summarize, far from undermining the validity of the C-LIM, the Styck & Watkins studies provide strong and powerful support for the clinical utility and validity of the C-LIM when evaluating EL test performance.

*Table adapted from: Styck, K. M. & Watkins, M. W. (2013). Diagnostic Utility of the Culture-Language Interpretive Matrix for the Wechsler Intelligence Scales for Children—Fourth Edition Among Referred Students. *School Psychology Review*, 42(4), 367-382.

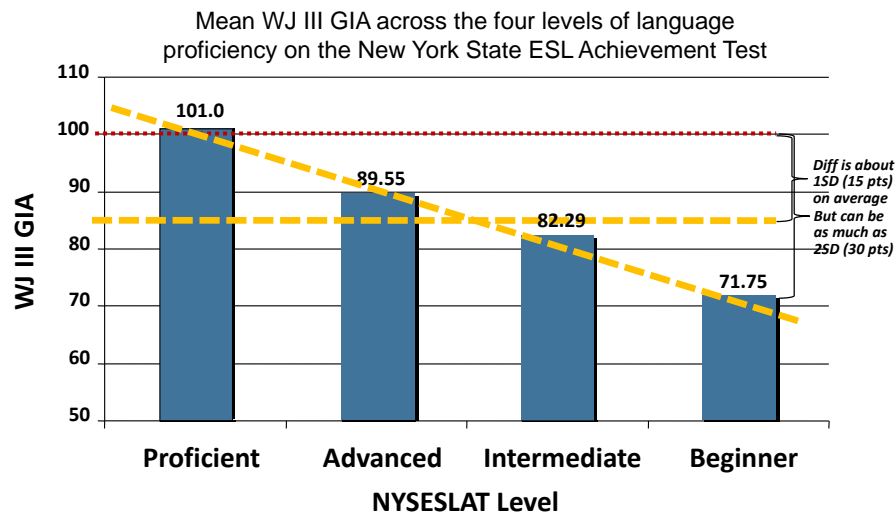
Fairness in Determining “Average” Performance: EL to ES

Matrix of WISC subtest means arranged by EL vs. ES test performance

| | | DEGREE OF LINGUISTIC DEMAND | | |
|----------------------------|---------|-----------------------------|--------------|------------|
| | | LOW | MODERATE | HIGH |
| DEGREE OF CULTURAL LOADING | LOW | Coding Object Assembly | Block Design | Digit Span |
| | Level 1 | SS= 99 | Level 2 | SS= 97 |
| | Level 2 | SS= 97 | Level 3 | SS= 91 |
| | Level 3 | SS= 91 | Level 4 | SS= 89 |
| | Level 4 | SS= 89 | Level 5 | SS= 85 |
| | Level 5 | SS= 85 | | |

Research Foundations for EL Evaluation: EL to EL

General ability level performance as compared to other English learners

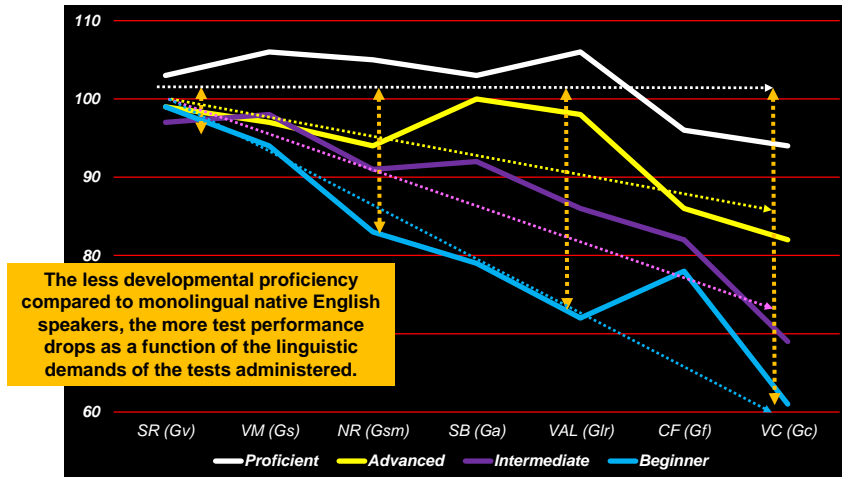


Source: Sotelo-Dynega, M., Ortiz, S.O., Flanagan, D.P., Chaplin, W. (2013).

Research Foundations for EL Evaluation: EL to EL

Subtest level performance as compared to other English Learners

Domain specific scores across the seven WJ III subtests according to language proficiency level on the NYSESLAT

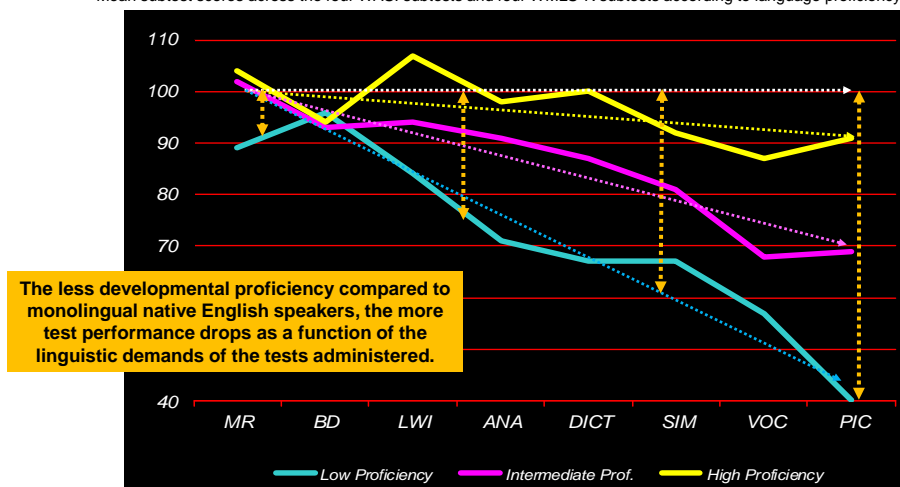


Source: Sotelo-Dynega, M., Ortiz, S.O., Flanagan, D.P., Chaplin, W. (2013). English Language Proficiency and Test Performance: Evaluation of bilinguals with the Woodcock-Johnson III Tests of Cognitive Ability. *Psychology in the Schools*, Vol 50(8), pp. 781-797.

Research Foundations for EL Evaluation: EL to EL

Subtest level performance as compared to other English Learners

Mean subtest scores across the four WASI subtests and four WMLS-R subtests according to language proficiency level



Source: Dynda, A. M. (2008). The relation between language proficiency and IQ test performance. Unpublished manuscript. St. John's University, NY.

Summary of Research Foundations for EL Evaluation

1. COMPARED TO ENGLISH SPEAKERS (EL to ES): Test performance of ELs is moderated by the degree to which a given index or subtest relies on or requires age- or grade-expected English language development and the acquisition of incidental acculturative knowledge.

2. COMPARED TO ENGLISH LEARNERS (EL to EL): Test performance of ELs is further moderated by the degree to which an EL varies in terms of their own developmental English language proficiency and acculturative knowledge acquisition.

Proper interpretation of EL test performance thus requires a true peer group of other ELs that is based not on the language spoken by the individual but on comparison to other ELs with the same degree of English exposure and development.

With one exception, current test norm samples lack control for developmental differences in English language exposure. This means that interpretation of test scores at any level must be made within the context of research which provides the only empirically-derived, albeit, very rough, true peer standard or "norm group".

Use of research on the relative test performance of ELs based on language exposure (as reflected by the degree of "difference" the student displays relative to the norm samples of the tests being used) is the very foundation and sole purpose of the C-LIM.

SLD Identification with an English Learner: A Case Study

1: Enter all available subtest scores in C-LIM Analyzer to determine validity

2: When likely/possibly valid, transfer data and enter remaining composite scores

3: Use XBA to conduct follow up testing where indicated and as necessary

4: Enter follow up tests and re-evaluate pattern with C-LIM Summary

5: If still likely/possibly valid, evaluate follow up testing results via XBA Analyzer

6: Transfer cohesive composites (and academic subtests) to Data Organizer

7: Identify deficits for native language re-evaluation and compare to original scores

8: Select best scores for PSW Analysis and designate each as strength or weakness

9: Evaluate scores and results from PSW-A Data Summary and PSW Analyzer

10: Use additional data and information to support interpretations and conclusions

Procedures
for Step 1

SLD Identification with an English Learner: A Case Study

Culture-Language Interpretive Matrix - Analyzer & Data Entry
Release: 2.3

Transfer Scores | Clear Unused Tests | Populate C-LIM by selecting battery/test name here, then press enter → WJ IV COG | C-ETC Reference | Clear All Data

Interpretive Guide | Submit Variability? | Culture-Language Interpretive Matrix - Analyzer and Data Entry | C-LIM Level Graph | C-LIM Main Graph

Name: Maria Ayala - Case Study | Age: 9 years 8 month(s) | Grade: 4 | Date: 5/29/2017

DEGREE OF LINGUISTIC DEMAND

| LOW | MODERATE | HIGH |
|--|---|--|
| CELL 1: LowC/LowL WISC-V Matrix Reasoning: 75 WISC-V Visual Puzzles: 95 Cell Average: 85 | CELL 2: LowC/Moderate WISC-V Block Design: 95 WISC-V Coding: 95 WISC-V Picture Span: 85 WISC-V Symbol Search: 85 Cell Average: 90 | CELL 3: LowC/HighL WISC-V Digit Span: 75 Cell Average: 75 |
| CELL 4: ModC/LowL Cell Average: 90 | CELL 5: ModC/Moderate WISC-V Figure Weights: 75 WJ IV COG Nonword Repetition: 85 WJ IV COG Visual-Auditory Learning: 75 Cell Average: 75 | CELL 6: ModC/HighL WJ IV COG Phonological Processing: 59 Cell Average: 59 |
| Cell Average: 85 | Cell Average: 85 | Cell Average: 67 |

Once your analysis is complete and test scores are deemed to be “valid,” use this button (aka, the “Golden Ticket”) to automatically transfer scores to their respective core test tabs (e.g., WISC-V, WJ IV). Subtests from other batteries that have no core test tab will go to the appropriate CHC domains in the XBA Analyzer (e.g., CTOPP-2, CASL-2, etc.)

SLD Identification with an English Learner: A Case Study

WISC-V® Data Analysis
(age range - 6.0 - 16.11) Release: 2.3

Name: Maria Ayala - Case Study | Grade: 4 | Age: 9 years 8 month(s) | Date: 5/29/2017

WISC-V | WAS-IV | WPPSI-IV | WIAT-III | WJ IV COG | WJ IV ACH | WJ IV OL | KABC-II | KITA-3 | CAS2 | DAS-II | SBS

| Index Name | Enter scores | PR | Transfer scores | Criteria for Cohesion: Is variability... significant or substantial? Infrequent or uncommon? | Follow up Recommendations: Do the results suggest a need for follow up? |
|---|--------------|------|-----------------|--|---|
| Verbal Comprehension Index (VCI) | 76 | 5th | | No | No, not considered necessary |
| Similarities (Gc:VL, GFI) | ✓ | | | | |
| Vocabulary (VL) | 6 | 9th | | | |
| Information (KO) | | | | | |
| Comprehension (KD) | | | | | |
| Fluid Reasoning Index (FRI) | 82 | 10th | | No | No |
| Matrix Reasoning (I) | ✓ | | | | |
| Figure Weights (RG,RQ) | 7 | 10th | | | |
| Picture Concepts (I) | | | | | |
| Arithmetic (Gsm:MW,Gq:A3) | | | | | |
| Visual Spatial Index (VSI) | 95 | 37th | | No | No, not considered necessary |
| Block Design* (Vz) | ✓ | | | | |
| Visual Puzzles (Vz) | 9 | 37th | | | |

*Additional process scaled scores can be generated for Block Design (see WISC-V Administration and Scoring Manual Supplement). These scaled processes are available in the XBA Analyzer (Vz drop down menu).

Enter remaining test composite or index scores into appropriate cells.

SLD Identification with an English Learner: A Case Study

WISC-V® Data Analysis
(age range = 6.0 - 16.11) Release: 2.3

Name: Maria Ayala - Case Study Grade: 4 Age: 9 years 8 month(s) Date: 5/29/2017

WISC-V WAIS-IV WPPSI-IV WIAT-III WI IV COG WI IV ACH WI IV OL KABC-II KTEA-3 CAS2 DAS-II SBS

| Index Name (see for integrated graph) | Subtest Name | Enter scores | PR | Transfer scores | Criteria for Cohesion: Is variability... significant or substantial? infrequent or uncommon? | Follow up Recommendations Do the results suggest a need for follow up? |
|--|------------------------------|--------------|------|-----------------|---|---|
| Verbal Comprehension Index (VCI) | Similarities (Gc-VL, Gf-I) | 76 | 5th | | COHESIVE The VCI provides an estimate of Crystallized Intelligence (Gc). 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. Word knowledge is measured by the Vocabulary subtest. Below Average, and the ability to reason with words as measured by the Similarities subtest was Well Below Average relative to same age peers. The difference between the scores that comprise the VCI is not significant and a difference of this size is considered common in the general population. This means that the VCI is a good summary of Crystallized Intelligence. The individual's VCI of 76 (2-80) is classified as Well Below Average and is ranked at the 5th percentile, indicating performance as good as or better than 5% of same age peers from the general population. | No, not considered necessary Gc-VI = 76 Transfer to Data Organizer Because the difference between the scores that comprise the VCI is not substantial (i.e., less than 15 SD), indicating similar subtest performances, follow up is not considered necessary. |
| | Vocabulary (VL) | 6 | 9th | | | |
| | Information (KI) | | | | | |
| | Comprehension (KO) | | | | | |
| Fluid Reasoning Index (FRI) | Matrix Reasoning (I) | 82 | 12th | | COHESIVE The FRI provides an estimate of Fluid Reasoning (Gf). Gf refers to a type of thinking that an individual may use when faced with a relatively new or novel task that cannot be performed automatically. Inductive reasoning as measured by the Matrix Reasoning subtest was Low Average and general sequential (deductive) reasoning and quantitative reasoning as measured by the Figure Weights subtest was Low Average relative to same age peers. The difference between the scores that comprise the FRI is not significant and a difference of this size is considered common in the general population. This means that the FRI is a good summary of Fluid Reasoning. The FRI of 82 (73-86) is classified as Below Average and is ranked at the 12th percentile, indicating performance as good as or better than 12% of same age peers from the general population. | No, not considered necessary Gf-AB = 82 Transfer to Data Organizer Because the difference between the scores that comprise the FRI is not substantial (less than 15 SD), indicating similar subtest performances, follow up is not considered necessary. |
| | Figure Weights (RG, RQ) | 7 | 16th | | | |
| | Picture Concepts (I) | | | | | |
| | Arithmetic (Gsm, MV, Gq, A3) | | | | | |
| Visual Spatial Index (VSI) | Block Design* (Vz) | 95 | 37th | | COHESIVE The VSI provides an estimate of Visual Processing (Gv). Gv refers to an individual's ability to generate visual images and perceive and analyze visual patterns and visual information. The ability to understand visual-spatial relationships to construct geometric designs from at least 10% of the general population. The difference between the scores that comprise the VSI is not significant and a difference of this size is considered common in the general population. This means that the VSI is a good summary of Visual Processing. The VSI of 95 (91-99) is classified as Average and is ranked at the 37th percentile, indicating performance as good as or better than 37% of same age peers from the general population. | No, not considered necessary Gv-Vz = 95 Transfer to Data Organizer Because the difference between the scores that comprise the VSI is not substantial (less than 15 SD) and both scores are at least average, follow up is not considered necessary. |
| | Visual Puzzles (Vz) | 9 | 37th | | | |
| | Visual Puzzles (Vz) | 9 | 37th | | | |

*Additional process scaled scores can be generated for Block Design (see WISC-V Administration and Scoring Manual Supplement). These subtest processes are available in the XBA Analyzer. Or drop down menu.

X-BASS provides automatic analysis of cohesion for all composites entered with new and enhanced interpretive statements.

SLD Identification with an English Learner: A Case Study

WJ IV® Cognitive Data Analysis
(age range = 2.0 - 90+) Release: 2.3

Name: Maria Ayala - Case Study Grade: 4 Age: 9 years 8 month(s) Date: 5/29/2017

WISC-V WAIS-IV WPPSI-IV WIAT-III WI IV COG WI IV ACH WI IV OL KABC-II KTEA-3 CAS2 DAS-II SBS

| Cluster Name (check box for integrated graph) | Subtest Name | Enter scores | PR | Transfer scores | Criteria for Cohesion: Is variability... significant or substantial? infrequent or uncommon? | Follow up Recommendations Do the results suggest a need for follow up? |
|--|---------------------------------------|--------------|------|-----------------|---|---|
| Auditory Processing* (Ga) | Phonological Processing (PC) | 91 | 47th | | COHESIVE The WI IV COG Auditory Processing (Ga) is primarily a measure of Auditory Processing. It is a measure of the ability to perceive, analyze, and synthesize auditory stimuli, and to discriminate subtle differences in patterns of sound (e.g., complex musical structure) and speech when presented under distorted conditions. The difference between the scores that comprise the WI IV COG Auditory Processing (Ga) 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 WI IV COG Auditory Processing (Ga) is a good psychometric summary of Auditory Processing. Additionally, information regarding where the subtest scores fall relative to each other and relative to the general population is unlikely to add clinically relevant information above and beyond the WI IV COG Auditory Processing (Ga), although clinical judgement is always necessary when making this determination. The individual's score on the WI IV COG Auditory Processing (Ga) of 91 (81-96) is classified as Average/Within Normal Limits and is ranked at the 27th percentile, indicating performance as good as or better than 27% of same age peers from the general population. | Yes, recommended for lowest score Ga = 91 Transfer to Data Organizer Because the difference between the scores that comprise the composite is at least 15D, and the lower score is indicative of a weakness or deficit, follow up on the lowest score is recommended. |
| | Nonword Repetition (Gsm, MS, Ga, ULM) | 84 | 14th | | | |
| | | | | | | |
| Long-Term Retrieval (Glr) | Story Recall (MM) | 77 | 8th | | COHESIVE The WI IV COG Long-Term Retrieval (Glr) is primarily a measure of Long-Term Storage and Retrieval. Glr refers to the ability to store information in and fluently retrieve new or previously acquired information (e.g., concepts, ideas, items, names) from long-term memory. The difference between the scores that comprise the WI IV COG Long-Term Retrieval (Glr) 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 WI IV COG Long-Term Retrieval (Glr) is a good psychometric summary of Long-Term Storage and Retrieval. 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 WI IV COG Long-Term Retrieval (Glr), although clinical judgement is always necessary when making this determination. The individual's score on the WI IV COG Long-Term Retrieval (Glr) of 77 (72-82) is classified as Below Average/Normative Weakness and is ranked at the 8th percentile, indicating performance as good as or better than 8% of same age peers from the general population. | No, not considered necessary Glr = 77 Transfer to Data Organizer Because the difference between the scores that comprise the composite is not substantial (i.e., less than 2/3 SD) and both scores are indicative of a weakness or deficit, follow up is not considered necessary. |
| | Visual-Auditory Learning (MA) | 75 | 5th | | | |
| | | | | | | |

*Although the subtests that comprise this composite measure different domains, Nonword Repetition has a secondary loading on auditory processing and therefore, a Ga composite may be transferred to the Data Organizer (if it is determined to be cohesive).

Composites for any supplemental tests used in the evaluation must also be entered.

SLD Identification with an English Learner: A Case Study

WISC-V® Data Analysis
(age range = 6.0 - 11.11) Release: 2.3

Name: Maria Ayala - Case Study Grade: 4 Age: 9 years 8 month(s) Date: 5/29/2017

WISC-V WAS-IV WPPSI-IV WIAT-III WI IV COG WI IV ACH WI IV OL KABC-II KTEA-3 CAS2 DAS-II SBS

| Index Name (see for integrated graph) | Enter scores | PR | Transfer scores | Criteria for Cohesion: Is variability... significant or substantial? Infrequent or uncommon? | Follow up Recommendations Do the results suggest a need for follow up? |
|--|--------------|------|-----------------|---|---|
| Verbal Comprehension Index (VCI) | 76 | 5th | | No | No, not considered necessary |
| Similarities (GV-L, GT) | 5 | 58th | | | |
| Vocabulary (VL) | 6 | 98th | | | |
| Information (KI) | | | | | |
| Comprehension (KO) | | | | | |
| Fluid Reasoning Index (FRI) | 82 | 12th | | No | No, not considered necessary |
| Matrix Reasoning (I) | 7 | 16th | | | |
| Figure Weights (RG, RO) | 7 | 16th | | | |
| Picture Concepts (I) | | | | | |
| Arithmetic (Gsm, MV, Gq, A3) | | | | | |
| Visual Spatial Index (VSI) | 95 | 37th | | No | No, not considered necessary |
| Block Design (Vz) | 9 | 37th | | | |
| Visual Puzzles (Vz) | 9 | 37th | | | |

Additional process scores can be generated for Block Design (see WISC-V Administration and Scoring Manual Supplement). These subtest processes are available in the XBA Analyzer or drop down menu.

Again, X-BASS provides automatic and detailed evaluation of cohesion for composites that are comprised by the subtests administered.

SLD Identification with an English Learner: A Case Study

WIAT-III® Data Analysis
(age range = 4.0 - 50.11) Release: 2.3

Name: Maria Ayala - Case Study Grade: 4 Age: 9 years 8 month(s) Date: 5/29/2017

WISC-V WAS-IV WPPSI-IV WIAT-III WI IV COG WI IV ACH WI IV OL KABC-II KTEA-3 CAS2 DAS-II SBS

| Composite Name (check box for integrated graph) | Enter scores | PR | Transfer scores | Criteria for Cohesion: Is variability... significant or substantial? Infrequent or uncommon? | Follow up Recommendations Do the results suggest a need for follow up? |
|--|--------------|------|-----------------|---|---|
| Total Reading (enter scores under BRS/RF) | 84 | 14th | | Not applicable | |
| Word Reading (BRS) | 92 | 9th | | | |
| Pseudoword Decoding (BRS) | 98 | 5th | | | |
| Reading Comprehension (RC) | 76 | 5th | | | |
| Oral Reading Fluency (RF) | 80 | 9th | | | |
| Basic Reading (Grw-R) | 94 | 34th | | No | No, not considered necessary |
| Word Reading (BRS) | 92 | 30th | | | |
| Pseudoword Decoding (BRS) | 98 | 45th | | | |
| Reading Compr. and Fluency (Grw-R) | 76 | 5th | | No | No, not considered necessary |
| Reading Comprehension (RC) | 76 | 5th | | | |
| Oral Reading Fluency (RF) | 80 | 9th | | | |
| Early Reading Skills (BRS, Ga-PC) | | | | | |
| Written Expression (Grw-W) | 92 | 5th | | Not applicable | No, not considered necessary |
| Spelling (WE) | 100 | 0th | | | |
| Alphabet Writing Fluency (WE) | | | | | |
| Sentence Composition (WE) | 86 | 18th | | | |
| Essay Composition (WE) | 93 | 12th | | | |

Because the C-LIM is not appropriate for achievement tests, all scores, both composites and subtests must be entered on the corresponding core achievement test tab.

SLD Identification with an English Learner: A Case Study

- 1: Enter all available subtest scores in C-LIM Analyzer to determine validity
- 2: When likely/possibly valid, transfer data and enter remaining composite scores
- 3: Use XBA to conduct follow up testing where indicated and as necessary
- 4: Enter follow up tests and re-evaluate pattern with C-LIM Summary
- 5: If still likely/possibly valid, evaluate follow up testing results via XBA Analyzer
- 6: Transfer cohesive composites (and academic subtests) to Data Organizer
- 7: Identify deficits for native language re-evaluation and compare to original scores
- 8: Select best scores for PSW Analysis and designate each as strength or weakness
- 9: Evaluate scores and results from PSW-A Data Summary and PSW Analyzer
- 10: Use additional data and information to support interpretations and conclusions

Procedures
for Step 1

SLD Identification with an English Learner: A Case Study

WISC-V® Data Analysis
(age range = 6:0 - 16:11) Release: 2.3

Name: Maria Ayala - Case Study

X-BASS indicates no follow up necessary on any of the WISC-V composites

| Index Name | Score | PR | Composite | Follow up |
|----------------------------------|-------|----|-----------|------------------------------|
| Verbal Comprehension Index (VCI) | 78 | 5 | No | No, not considered necessary |
| Block Design (BD) | 5 | 5 | No | No, not considered necessary |
| Visual Spatial Index (VSI) | 6 | 9 | No | No, not considered necessary |
| Fluid Reasoning Index (FRI) | 82 | 12 | No | No, not considered necessary |
| Matrix Reasoning (MR) | 7 | 16 | No | No, not considered necessary |
| Figure Weights (FW) | 7 | 16 | No | No, not considered necessary |
| Picture Concepts (PC) | 9 | 37 | No | No, not considered necessary |
| Arithmetic (AR) | 9 | 37 | No | No, not considered necessary |
| Visual Spatial Index (VSI) | 95 | 37 | No | No, not considered necessary |
| Block Design (BD) | 9 | 37 | No | No, not considered necessary |
| Visual Puzzles (VP) | 9 | 37 | No | No, not considered necessary |
| Working Memory Index (WMI) | 79 | 8 | No | No, not considered necessary |
| Digit Span (DS) | 6 | 9 | No | No, not considered necessary |
| Picture Span (PS) | 7 | 16 | No | No, not considered necessary |
| Letter-Number Sequencing (LNS) | 84 | 34 | No | No, not considered necessary |
| Coding (CD) | 9 | 37 | No | No, not considered necessary |
| Symbol Search (SS) | 8 | 25 | No | No, not considered necessary |
| Cancelation (CA) | 8 | 25 | No | No, not considered necessary |

*Additional process scores can be generated for Block Design (see WISC-V Administration and Scoring Manual Supplement). These subtest processes are available in the XBA Analyzer (Go drop down menu).

*Additional process scores can be generated for Digit Span (see WISC-V Administration and Scoring Manual Supplement). These subtest processes are available in the XBA Analyzer (Go drop down menu).

*Additional process scores can be generated for Letter-Number Sequencing (see WISC-V Administration and Scoring Manual Supplement). These subtest processes are available in the XBA Analyzer (Go drop down menu).

*Additional process scores can be generated for Coding (see WISC-V Administration and Scoring Manual Supplement). These subtest processes are available in the XBA Analyzer (Go drop down menu).

*Additional process scores can be generated for Symbol Search (see WISC-V Administration and Scoring Manual Supplement). These subtest processes are available in the XBA Analyzer (Go drop down menu).

*Additional process scores can be generated for Cancelation (see WISC-V Administration and Scoring Manual Supplement). These subtest processes are available in the XBA Analyzer (Go drop down menu).

SLD Identification with an English Learner: A Case Study

WIAT-III® Data Analysis
(age range = 4.0 - 50.11) Release: 2.3

Name: Maria Ayala - Case Study Grade: 4 Age: 9 years 8 month(s) Date: 5/29/2017

WISC-V WAS-IV WPPSI-IV WIAT-III WI IV COG WI IV ACH WI IV OL RABC-II KTEA-3 CAS-2 DAS-II SBS

| Composite Name (check box for integrated graph) | Enter scores | PR | Transfer scores | Criteria for Cohesion: Is variability... significant or substantial? Infrequent or uncommon? | Follow up Recommendations Do the results suggest a need for follow up? |
|---|--------------|----|-----------------|---|---|
| Total Reading* (enter scores under BRS/RC/F) | 84 | 14 | | Not applicable | Data not available |
| Word Reading (BRS) | 92 | 30 | | | |
| Pseudoword Decoding (BRS) | 98 | 45 | | | |
| Reading Comprehension (RC) | 76 | 5 | | | |
| Oral Reading Fluency (RF) | 80 | 9 | | | |
| *This composite spans 3 or more reading subdomains | | | | | |
| Basic Reading (Grw-R) | 94 | 34 | | No | No |
| Word Reading (BRS) | 92 | 30 | | | |
| Pseudoword Decoding (BRS) | 98 | 45 | | | |
| COHESIVE Because the difference between the scores that comprise the composite is not significant and a difference of this size occurs in more than 10% of the general population which makes it relatively common. The composite is therefore, cohesive and should be interpreted because it provides a good summary of the theoretically related abilities it was intended to represent. | | | | | |
| No, not considered necessary BRS = 94 Transfer to Data Organizer | | | | | |
| Reading Compr. and Fluency (Grw-R) | 76 | 5 | | No | No |
| Reading Comprehension (RC) | 76 | 5 | | | |
| Oral Reading Fluency (RF) | 80 | 9 | | | |
| Early Reading Skills (BRS, Ga PC) | | | | | |
| COHESIVE Because the difference between the scores that comprise the composite is not significant and a difference of this size occurs in more than 10% of the general population which makes it relatively common. The composite is therefore, cohesive and should be interpreted because it provides a good summary of the theoretically related abilities it was intended to represent. | | | | | |
| No, not considered necessary RC or RF = 76 Transfer to Data Organizer | | | | | |
| Written Expression (Grw-W) | 92 | 30 | | Not applicable | Data not available |
| Spelling (WE) | 100 | 50 | | | |
| Alphabet Writing Fluency (WE) | | | | | |
| Sentence Composition (WE) | 86 | 18 | | | |
| Essay Composition (WE) | 93 | 32 | | | |
| The lowest score in the composite is 86, which is not a weakness or deficient performance, however the two lowest scores are not significantly different from one another, indicating similar performance. Therefore, follow up is not considered necessary. | | | | | |
| No, not considered necessary WE = 92 Transfer to Data Organizer | | | | | |

X-BASS recommends no follow up on any WIAT-III academic composites

SLD Identification with an English Learner: A Case Study

WJ IV® Cognitive Data Analysis
(age range = 2.0 - 90+) Release: 2.3

Name: Maria Ayala - Case Study Grade: 4 Age: 9 years 8 month(s) Date: 5/29/2017

WISC-V WAS-IV WPPSI-IV WIAT-III WI IV COG WI IV ACH WI IV OL RABC-II KTEA-3 CAS-2 DAS-II SBS

| Cluster Name (check box for integrated graph) | Enter scores | PR | Transfer scores | Criteria for Cohesion: Is variability... significant or substantial? Infrequent or uncommon? | Follow up Recommendations Do the results suggest a need for follow up? |
|---|--------------|----|-----------------|---|---|
| Auditory Processing* (Ga) | 91 | 27 | | No | No |
| Phonological Processing (PC) | 99 | 47 | | | |
| Nonword Repetition (Gsm, MS, Ga, LIM) | 84 | 14 | | | |
| COHESIVE Because the difference between the scores that comprise the composite is not significant and a difference of this size occurs in more than 10% of the general population which makes it relatively common. The composite is therefore, cohesive and should be interpreted because it provides a good summary of the theoretically related abilities it was intended to represent. | | | | | |
| Yes, recommended for lowest score Ga = 91 Transfer to Data Organizer | | | | | |
| Long-Term Retrieval (Glr) | 77 | 6 | | No | No |
| Story Recall (MM) | 79 | 8 | | | |
| Visual-Auditory Learning (MA) | 75 | 5 | | | |
| COHESIVE Because the difference between the scores that comprise the composite is not significant and a difference of this size occurs in more than 10% of the general population which makes it relatively common. The composite is therefore, cohesive and should be interpreted because it provides a good summary of the theoretically related abilities it was intended to represent. | | | | | |
| No, not considered necessary Glr = 77 Transfer to Data Organizer | | | | | |
| Visual Perception (VSI) | | | | | |
| Visual Spatial (VSI) | | | | | |
| Picture Naming (VSI) | | | | | |
| Transfer Scores to XBA Analyzer Use the check boxes in this column to select subtests/scores for transfer to the XBA Analyzer tab for follow up evaluation and analysis. Click the left button to transfer or right button to clear selections. | | | | | |

X-BASS does indicate follow up necessary on WJ IV COG Auditory Processing (Ga) composite

SLD Identification with an English Learner: A Case Study

WJ IV® Cognitive Data Analysis
(age range = 2.0 - 90+)

Release: 2.3

Name: Maria Ayala - Case Study Grade: 4 Age: 9 years 8 month(s) Date: 5/29/2017

WISC-V WJ IV WPPSI-IV WJ IV COG WJ IV ACH WJ IV OL RARC-II KTEA-3 CAS2 DAS-II SB5

| Cluster Name (check box for integrated graph) | Subtest Name | Enter scores | PR | Transfer scores | Criteria for Cohesion: Is variability... significant or substantial? Insufficient or uncommon? | Follow up Recommendations Do the results suggest a need for follow up? |
|--|-----------------------------------|--------------|----|-------------------------------------|--|--|
| <input type="checkbox"/> | Auditory Processing (Ga) | 91 | 27 | <input checked="" type="checkbox"/> | No | Yes, recommended for lowest score Ga = 91 Transfer to Data Organizer |
| <input type="checkbox"/> | Phonological Processing (PC) | 99 | 47 | <input checked="" type="checkbox"/> | COHESIVE | Because the difference between the scores that comprise the composite is at least 150, and the lower score is indicative of a weakness or deficit, follow up on the lower score is considered necessary to determine if it is an accurate and valid representation of ability. |
| <input type="checkbox"/> | Nonword Repetition (Gsm;MS;Ga;UM) | 84 | 14 | <input checked="" type="checkbox"/> | The difference between the scores that comprise the composite is not significant and a difference of this size occurs in more than 10% of the general population which makes it relatively common. The composite is therefore cohesive and should be interpreted because it provides a good summary of the theoretically related abilities it was intended to represent. | |
| <input checked="" type="checkbox"/> | Long-Term Retrieval (Glr) | 77 | 6 | <input type="checkbox"/> | No | No, not considered necessary Glr = 77 Transfer to Data Organizer |
| <input checked="" type="checkbox"/> | Story Recall (MM) | 79 | 8 | <input type="checkbox"/> | COHESIVE | Because the difference between the scores that comprise the composite is not substantial (i.e., less than 2/3 SD) and both scores are indicative of a deficit, follow up is not considered necessary. |
| <input checked="" type="checkbox"/> | Visual-Auditory Learning (MA) | 75 | 5 | <input type="checkbox"/> | The difference between the scores that comprise the composite is not significant and a difference of this size occurs in more than 10% of the general population which makes it relatively common. The composite is therefore cohesive and should be interpreted because it provides a good summary of the theoretically related abilities it was intended to represent. | |
| <input type="checkbox"/> | Visual Processing (Gv) | | | <input type="checkbox"/> | | |
| <input type="checkbox"/> | Visualization (Vz) | | | <input type="checkbox"/> | | |
| <input type="checkbox"/> | Picture Recognition (MV) | | | <input type="checkbox"/> | | |

Subtests checked for transfer to XBA Analyzer tab

[Transfer Scores to XBA Analyzer](#) Use the check boxes in this column to select subtests/scores for transfer to the XBA Analyzer tab for follow up evaluation and analysis. Click the left button to transfer or right button to clear selections. [Clear All](#)

SLD Identification with an English Learner: A Case Study

SHORT-TERM MEMORY (Gsm)
(check these boxes to select score for integrated graph)

[Clear Data](#) [Enter scores](#) [Converted Standard Score](#) [Composite Score Analyses](#)

| | | | | |
|--------------------------|---|----|----|----|
| <input type="checkbox"/> | WJ IV COG Nonword Repetition (Gsm;MS;Ga;UM) | 84 | 84 | -- |
| <input type="checkbox"/> | | | | |
| <input type="checkbox"/> | | | | |
| <input type="checkbox"/> | | | | |
| <input type="checkbox"/> | | | | |

[Reset Score Configuration](#) [Evaluate Score Configuration](#)
[Go to Gsm Test List Classifications](#) [Transfer Comp\(s\) to Data Organizer](#)

Score configuration and interpretation:

The WJ IV COG Nonword Repetition subtest loads primarily on Gsm, not Ga. It can be combined with other WISC-V Gsm subtests to form an XBA composite or the WISC-V WMI can be used by itself if it has been determined to be cohesive.

The WJ IV COG Phonological Processing subtest loads primarily on Ga. Thus, it needs to be supplemented with another Ga subtest (e.g., WJ IV OL Sound Blending) to form a useable composite since the original composite was not cohesive.

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

[Clear Data](#) [Enter scores](#) [Converted Standard Score](#) [Composite Score Analyses](#)

| | | | | |
|--------------------------|--|----|----|----|
| <input type="checkbox"/> | WJ IV COG Phonological Processing (Ga;PC;Glr;FW) | 99 | 99 | -- |
| <input type="checkbox"/> | | | | |
| <input type="checkbox"/> | | | | |
| <input type="checkbox"/> | | | | |
| <input type="checkbox"/> | | | | |

[Reset Score Configuration](#) [Evaluate Score Configuration](#)
[Go to Ga Test List Classifications](#) [Transfer Comp\(s\) to Data Organizer](#)

Score configuration and interpretation:

SLD Identification with an English Learner: A Case Study

WISC-V/WJ IV/VIAT-III XBA DATA FOR Maria Ayala
DOE: 5/29/2017 DOB: 9/6/2007 Grade: 4

WECHSLER INTELLIGENCE SCALE FOR CHILDREN-V

| | | | | | |
|-----------------------------------|----|-------------------------------|----|-----------------------------|----|
| <i>Verbal Comprehension Index</i> | 76 | <i>Fluid Reasoning Index</i> | 82 | <i>Visual-Spatial Index</i> | 95 |
| Similarities | 5 | Matrix Reasoning | 7 | Block Design | 9 |
| Vocabulary | 6 | Figure Weights | 7 | Visual Puzzles | 9 |
| <i>Working Memory Index</i> | 79 | <i>Processing Speed Index</i> | 94 | | |
| Digit Span | 5 | Coding | 9 | | |
| Picture Span | 7 | Symbol Search | 8 | | |

WECHSLER INDIVIDUAL ACHIEVEMENT TEST-III

| | | | | | |
|----------------------|----|------------------------------|----|---------------------------|-----|
| <i>Basic Reading</i> | 94 | <i>Reading Comprehension</i> | 76 | <i>Written Expression</i> | 92 |
| Word Reading | 92 | Reading Comprehension | 76 | Spelling | 100 |
| Pseudoword Decoding | 98 | Oral Reading Fluency | 80 | Sentence Composition | 86 |
| | | | | Essay Composition | 93 |

WOODCOCK JOHNSON-IV TESTS OF COGNITIVE ABILITY

| | | | | | |
|----------------------------|----|-----------------------------|----|--------------------------|----|
| <i>Auditory Processing</i> | 91 | <i>LT Storage/Retrieval</i> | 77 | <i>Follow Up Testing</i> | |
| Phonological Processing | 99 | Story Recall | 79 | WJ IV OL Sound Blending | 88 |
| Nonword Repetition | 84 | Visual-Auditory Learning | 75 | | |

SLD Identification with an English Learner: A Case Study

- 1: Enter all available subtest scores in C-LIM Analyzer to determine validity
- 2: When likely/possibly valid, transfer data and enter remaining composite scores
- 3: Use XBA to conduct follow up testing where indicated and as necessary
- 4: Enter follow up tests and re-evaluate pattern with C-LIM Summary
- 5: If still likely/possibly valid, evaluate follow up testing results via XBA Analyzer
- 6: Transfer cohesive composites (and academic subtests) to Data Organizer
- 7: Identify deficits for native language re-evaluation and compare to original scores
- 8: Select best scores for PSW Analysis and designate each as strength or weakness
- 9: Evaluate scores and results from PSW-A Data Summary and PSW Analyzer
- 10: Use additional data and information to support interpretations and conclusions

Procedures
for Step 1

SLD Identification with an English Learner: A Case Study

Although supplemental tests can be entered on their respective core test tabs (if one is available for them), it is easier and quicker to simply enter them directly into the XBA Analyzer by selecting them from the appropriate drop down menus. In either case, they will automatically appear in the C-LIM Summary which permits re-examination of test score validity that now includes the additional scores.

Phonetic Coding (Ga:PC) ☐ ☐ ☐

Segmentation (PC) ☐ ☐ ☐

Sound Blending (PC) ☐ 88 21 ☐

Sound Awareness* (PC) ☐ ☐ ☐

*Sound Awareness is a screening test and does not contribute to a cluster. However, it can be used to form XBA composites by selecting it from the Ga domain drop down menu in the XBA Analyzer and entering the score there.

AUDITORY PROCESSING (Ga) Clear Data Enter scores Converted Standard Score Composite Score Analyses

(check these boxes to select score for integrated graph)

WJ IV COG Phonological Processing (Ga:PC;Glr:FW) ☐ 99 99 --

WJ IV OL Sound Blending (Ga:PC) ☐ ☐ ☐

WJ IV COG Nonword Repetition (Gsm:MS;Ga:UM) ☐ ☐ ☐

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

WJ IV ECAD Sound Blending (Ga:PC) ☐ ☐ ☐

WJ IV OL Segmentation (Ga:PC) ☐ ☐ ☐

WJ IV OL Sound Awareness (Ga:PC) ☐ ☐ ☐

WJ IV OL Sound Blending (Ga:PC) ☐ ☐ ☐

WRMT-3 Phonological Awareness (BRS;Grw-R:RD) ☐ ☐ ☐

Reset Score Configuration Evaluate Score Configuration

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

Score configuration and interpretation:

SLD Identification with an English Learner: A Case Study

Culture-Language Interpretive Matrix - Summary Data in X-BASS Release: 2.3

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

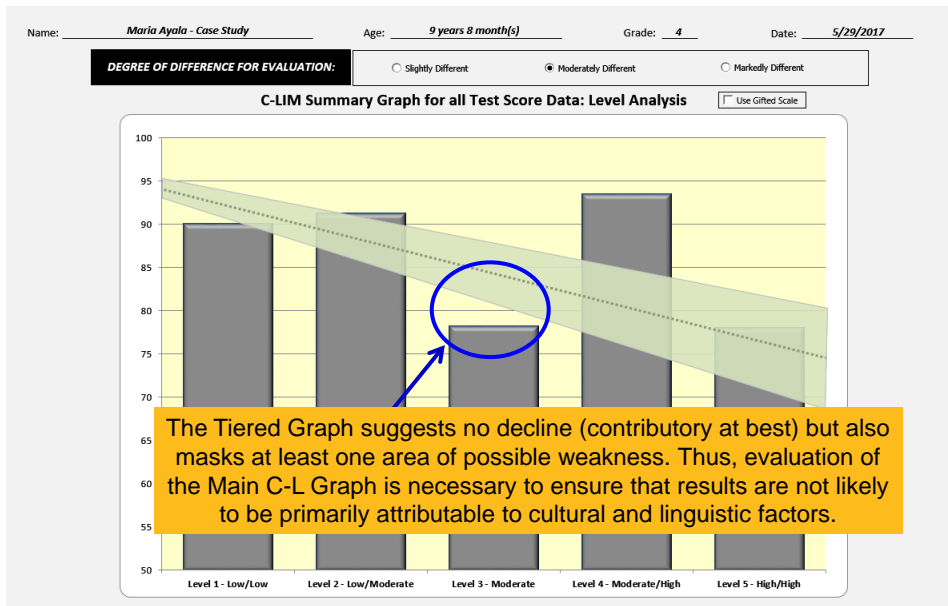
DEGREE OF LINGUISTIC DEMAND

| DEGREE OF CULTURAL DEMAND | DEGREE OF LINGUISTIC DEMAND | | | | |
|---------------------------|-----------------------------|------------------------------------|------------------------|-------------------------|-------|
| | LOW | MODERATE | HIGH | | |
| LOW | WISC-V Matrix Reasoning | 7 85 | WISC-V Block Design | 9 95 | |
| | WISC-V Visual Puzzles | 9 95 | WISC-V Coding | 9 95 | |
| | | WISC-V Picture Span | 7 85 | WISC-V Digit Span | 5 75 |
| | | WISC-V Symbol Search | 8 90 | | |
| | Cell Average = | 90 | Cell Average = | 91 | |
| MODERATE | | Score | WISC-V Figure Weights | 7 85 | |
| | | WJ IV COG Nonword Repetition | 75 | WJ IV OL Sound Blending | 88 88 |
| | | WJ IV COG Visual-Auditory Learning | 75 | | |
| | | Cell Average = | 80 | Cell Average = | 91 |
| | Score | | WISC-V Similarities | 5 75 | |
| | | | WISC-V Vocabulary | 6 80 | |
| | | | WJ IV COG Story Recall | 79 79 | |
| | Cell Average = | 80 | Cell Average = | 94 | |
| | Score | | Cell Average = | 78 | |

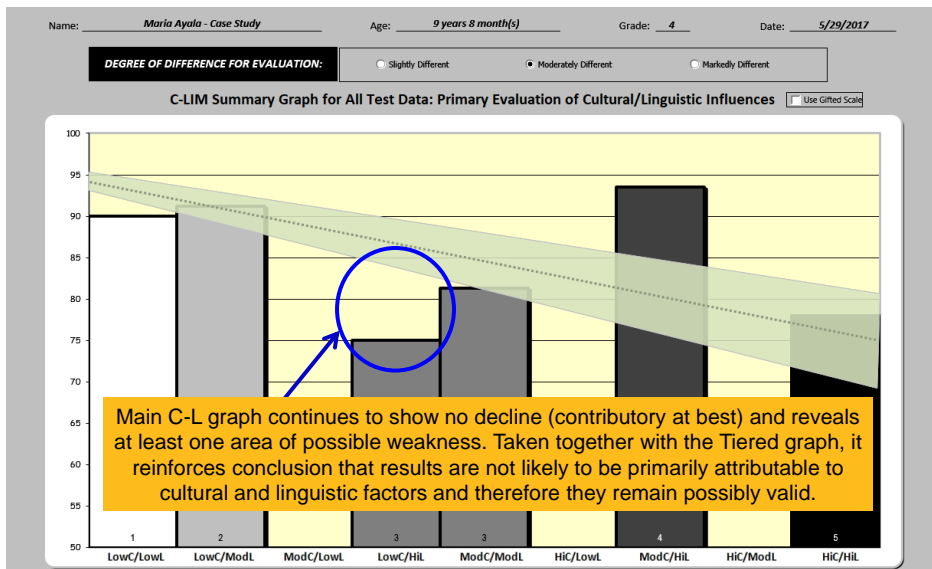
Supplemental tests given for purposes of follow up are automatically included in the C-LIM Summary but NOT the C-LIM Analyzer, unless they are also entered there manually

C-LIM Main Graph Language-Only Graph C-LIM Level Graph Culture-Only Graph Print C-LIM Matrix C-LIM Index

SLD Identification with an English Learner: A Case Study



SLD Identification with an English Learner: A Case Study



SLD Identification with an English Learner: A Case Study

- 1: Enter all available subtest scores in C-LIM Analyzer to determine validity
- 2: When likely/possibly valid, transfer data and enter remaining composite scores
- 3: Use XBA to conduct follow up testing where indicated and as necessary
- 4: Enter follow up tests and re-evaluate pattern with C-LIM Summary
- 5: If still likely/possibly valid, evaluate follow up testing results via XBA Analyzer
- 6: Transfer cohesive composites (and academic subtests) to Data Organizer
- 7: Identify deficits for native language re-evaluation and compare to original scores
- 8: Select best scores for PSW Analysis and designate each as strength or weakness
- 9: Evaluate scores and results from PSW-A Data Summary and PSW Analyzer
- 10: Use additional data and information to support interpretations and conclusions

Procedures
for Step 1

SLD Identification with an English Learner: A Case Study

| SHORT-TERM MEMORY (Gsm) | Clear Data | Enter scores | Converted Standard Score | Composite Score Analysis |
|---|--------------------------|--------------|------------------------------------|--------------------------|
| WJ IV COG Nonword Repetition (Gsm:MS;Ga:UM) | <input type="checkbox"/> | 84 | 84 | A |
| WISC-V Digit Span (Gsm:MW;MS) | <input type="checkbox"/> | 6 | 80 | A |
| WISC-V Picture Span (Gsm:MS) | <input type="checkbox"/> | 7 | 85 | A |
| COHESIVE: Use one, 3-subtest XBA composite | | | SS: 78 | |
| Reset Score Configuration | | | Evaluate Score Configuration | |
| Go to Go Test List Classifications | | | Transfer Comp(s) to Data Organizer | |

Score configuration and interpretation:
The difference between the highest and lowest scores is less than 1SD, therefore, they form a composite that is considered cohesive and likely a good summary of the set of theoretically related abilities that comprise it. Interpret the composite as an adequate estimate of the ability that it is intended to measure.

Combining WISC-V subtests from WMI creates a cohesive 3-subtest XBA composite (SS=78). Although it's ok to use existing WMI, a 3-subtest composite is more reliable than a 2-subtest test composite so the XBA composite is preferable and will be transferred to the Data Organizer.

Follow up for Ga indicates that scores do form a cohesive 2-subtest XBA composite (SS=92). Thus, performance in auditory processing domain is within average range and the XBA composite will be transferred to Data Organizer.

| AUDITORY PROCESSING (Ga) | Clear Data | Enter scores | Converted Standard Score | Composite Score Analysis |
|--|--------------------------|--------------|------------------------------------|--------------------------|
| WJ IV COG Phonological Processing (Ga:PC;Glr:FW) | <input type="checkbox"/> | 99 | 99 | A |
| WJ IV OL Sound Blending (Ga:PC) | <input type="checkbox"/> | 88 | 88 | A |
| COHESIVE: Use 2-subtest XBA composite | | | SS: 92 | |
| Reset Score Configuration | | | Evaluate Score Configuration | |
| Go to Go Test List Classifications | | | Transfer Comp(s) to Data Organizer | |

Score configuration and interpretation:
The difference between the two scores is less than 1SD and, therefore, they form a composite that is considered cohesive and likely a good summary of the set of theoretically related abilities that comprise it. Interpret the composite as an adequate estimate of the ability that it is intended to measure.

SLD Identification with an English Learner: A Case Study

- 1: Enter all available subtest scores in C-LIM Analyzer to determine validity
- 2: When likely/possibly valid, transfer data and enter remaining composite scores
- 3: Use XBA to conduct follow up testing where indicated and as necessary
- 4: Enter follow up tests and re-evaluate pattern with C-LIM Summary
- 5: If still likely/possibly valid, evaluate follow up testing results via XBA Analyzer
- 6: Transfer cohesive composites (and academic subtests) to Data Organizer
- 7: Identify deficits for native language re-evaluation and compare to original scores
- 8: Select best scores for PSW Analysis and designate each as strength or weakness
- 9: Evaluate scores and results from PSW-A Data Summary and PSW Analyzer
- 10: Use additional data and information to support interpretations and conclusions

Procedures
for Step 1

SLD Identification with an English Learner: A Case Study

Data Organizer and Score Summary
Release: 2.3

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

WISC-V WAB-IV WPPSI-IV WIAT-III WI-IV COW WI-IV ALN WI-IV CL RARC-9 REA-3 CAS2 DAS-II SBS

Guidelines for Selecting Best Composite Scores for SLD Evaluation

The purpose of this tab is to organize composites and subtests to assist in the selection of those to be used for evaluation of the pattern of strengths and weaknesses in the PSW Analyzer. Test names and scores can not be entered into this tab directly. Rather, this tab provides a summary of test battery and XBA composites that were transferred from other tabs because they were considered the best estimates of CHC abilities, academic areas, and selected neuropsychological domains. Use this tab to select the composites and subtest scores you would like to use in PSW analyses by clicking on the check box to the right of each one in any domain for which there are data. You may select up to two composites for each of the CHC broad ability (e.g., Gc, Gf, Gsm) and neuropsychological (e.g., Executive Functions, Orthographic Processing) domains and up to three scores for each of the academic areas. Note that you may also click on the "Data Organizer Graph" to view or print the information on this tab. For more information on how to select the best scores for use in PSW analyses, click the button to the right.

After you have made your selections, click the "SWW Indicator" button to continue with additional steps for conducting PSW analyses.

| CRYSTALLIZED INTELLIGENCE (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. | |
| WISC-V Verbal Comprehension Index (Gc-VL) | 76 <input type="checkbox"/> Test Comp <input type="button" value="Clear Score 1"/> <input type="button" value="Clear Score 2"/> <input type="button" value="Clear Score 3"/> | WISC-V Fluid Reasoning Index (Gf) | 82 <input type="checkbox"/> Test Comp <input type="button" value="Clear Score 1"/> <input type="button" value="Clear Score 2"/> <input type="button" value="Clear Score 3"/> |
| LONG-TERM STORAGE AND RETRIEVAL (Gp) | | 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. | |
| WI-IV COW Long-Term Retrieval (Gp) | 77 <input type="checkbox"/> Test Comp <input type="button" value="Clear Score 1"/> <input type="button" value="Clear Score 2"/> <input type="button" value="Clear Score 3"/> | WISC-V Working Memory Index (Gsm) | 79 <input type="checkbox"/> Test Comp <input type="button" value="Clear Score 1"/> <input type="button" value="Clear Score 2"/> <input type="button" value="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. | |
| WISC-V Visual Spatial Index (Gv-SD) | 95 <input type="checkbox"/> Test Comp <input type="button" value="Clear Score 1"/> <input type="button" value="Clear Score 2"/> <input type="button" value="Clear Score 3"/> | Auditory Processing (Ga) | 92 <input type="checkbox"/> Comp <input type="button" value="Clear Score 1"/> <input type="button" value="Clear Score 2"/> <input type="button" value="Clear Score 3"/> |

Only composites may be transferred to the cognitive domains of the Data Organizer. Both test-based composites and XBA composites can be transferred which may, in some cases, result in up to three scores. Only two of them may be chosen for use in PSW Analysis and selection should be based on ensuring that the score(s) that best and most validly represents the individual's ability in each domain are used.

SLD Identification with an English Learner: A Case Study

Data Organizer and Score Summary
Release: 2.3

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

WISC-V WAS-IV WPPSI-IV WIAT-III WIIV-CH WIIV-OL KABC-II KTEA-5 CAS2 DAS-II SRS

BASIC READING SKILLS (BRS)
Indicate which composite or subtests you wish to use for PSW analyses. All three scores may be selected for this domain.

WIAT-III Basic Reading Skills (BRS) 94 ☐ Test Comp ☐ Subtest ☐ Clear Score 1 ☐ Clear Score 2 ☐ Clear Score 3

READING COMPREHENSION (RC)
Indicate which composite or subtests you wish to use for PSW analyses. All three scores may be selected for this domain.

WIAT-III Reading Comprehension (RC-Grow-RC) 76 ☐ Test Comp ☐ Subtest ☐ Clear Score 1 ☐ Clear Score 2 ☐ Clear Score 3

READING FLUENCY (RF)
Indicate which composite or subtests you wish to use for PSW analyses. All three scores may be selected for this domain.

WIAT-III Oral Reading Fluency (RF-Grow-RF) 80 ☐ Test Comp ☐ Subtest ☐ Clear Score 1 ☐ Clear Score 2 ☐ Clear Score 3

WRITTEN EXPRESSION (WE)
Indicate which composite or subtests you wish to use for PSW analyses. All three scores may be selected for this domain.

WIAT-III Written Expression (WE) 92 ☐ Test Comp ☐ Subtest ☐ Clear Score 1 ☐ Clear Score 2 ☐ Clear Score 3

MATH CALCULATION (MC)
Indicate which composite or subtests you wish to use for PSW analyses. All three scores may be selected for this domain.

MATH PROBLEM SOLVING (MPS)
Indicate which composite or subtests you wish to use for PSW analyses. All three scores may be selected for this domain.

Although both achievement composite and subtest scores may be transferred to the Data Organizer, use of individual achievement subtests rather than composites is often useful for specifying areas of academic difficulty and pinpointing skills for targeted intervention. This also helps avoid having to decide where a composite should be used, for example, the WIAT-III Reading Comprehension and Fluency composite can be used for RC or RF which is ambiguous. Using the subtests that make up this composite clarifies the domains for each score.

Data Organizer provides a summary of test-based composites, any derived XBA composites, and any specific achievement subtests from a test tab or the XBA Analyzer.

Multilingual Assessment of ELs: Step by Step

Step 1. Test first in English (L2) and evaluate construct validity in all areas in English (exclusion of cultural/linguistic factors)

- If all scores indicate normative strengths ($SS \approx 90$ or higher) when tested in English (L2), scores are valid to the extent that a disability is not likely, thus no further testing is necessary.
- If some scores are normative weaknesses ($SS < \approx 90$) evaluate test score validity in a research-based manner, e.g., via the C-LIM.
- If C-LIM indicates primary influence of language/culture, test scores are likely invalid and indicate average ability in all areas and a disability is not likely, thus no further testing is necessary.
- If C-LIM indicates contributory or minimal influence of language/culture, test scores are likely to be valid and the evaluation should continue.

Step 2. Re-evaluate areas of weakness in native language (L2) to provide additional supporting evidence of validity (cross-linguistic confirmation)

- If data indicate an area is a strength (i.e., average), then original L2 score is invalid, use the L1 score.
- If data indicate an area is still a weakness, then original L2 score is valid, use the L2 score.

Step 3. Further cross-validate L1 and L2 test scores with contextual factors and pre-referral data and academic concerns (ecological validity for disability)

- Use all other case data and information to serve as the context by which to evaluate the test scores and ensure ecological validity to conclusions

SLD Identification with an English Learner: A Case Study

- 1: Enter all available subtest scores in C-LIM Analyzer to determine validity
- 2: When likely/possibly valid, transfer data and enter remaining composite scores
- 3: Use XBA to conduct follow up testing where indicated and as necessary
- 4: Enter follow up tests and re-evaluate pattern with C-LIM Summary
- 5: If still likely/possibly valid, evaluate follow up testing results via XBA Analyzer
- 6: Transfer cohesive composites (and academic subtests) to Data Organizer
- 7: Identify deficits for native language re-evaluation and compare to original scores
- 8: Select best scores for PSW Analysis and designate each as strength or weakness
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- 10: Use additional data and information to support interpretations and conclusions

Procedures
for Step 2

SLD Identification with an English Learner: A Case Study

Data Organizer and Score Summary
Release: 2.3

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

WISC-V WAB-IV WPPSI-IV WIAT-III WIIN COG WIIN ACH WIIN OL RARC-B KTEA-3 CB2 DAS-II SBS

Guidelines for Selecting Best Composite Scores for SLD Evaluation

The purpose of this tab is to organize composites and subtests to assist in the selection of those to be used for evaluation of the pattern of strengths and weaknesses in the PSW Analyzer. Test names and scores can not be entered into this tab directly. Rather, this tab provides a summary of test battery and XBA composites that were transferred from other tabs because they were considered the best estimates of CHC abilities, academic areas, and selected neuropsychological domains. Use this tab to select the composites and subtest scores you would like to use in PSW analyses by clicking on the check box to the right of each one in any domain for which there are data. You may select up to two composites for each of the CHC broad ability (e.g., Gc, Gf, Gsm) and neuropsychological (e.g., Executive Functions, Orthographic Processing) domains and up to three scores for each of the academic areas. Note that you may also click on the "Data Organizer Graph" to view or print the information on this tab. For more information on how to select the best scores for use in PSW analyses, click the button to the right.

After you have made your selections, click the "S&W Indicator" button to continue with additional steps for conducting PSW analyses.

| CRYSTALLIZED INTELLIGENCE (Gc) | FLUID REASONING (Gf) |
|---|--|
| WISC-V Verbal Comprehension Index (GcVI) 76 <input checked="" type="checkbox"/> Clear Score 1 | WISC-V Fluid Reasoning Index (GfVI) 82 <input checked="" type="checkbox"/> Clear Score 1 |
| <input type="checkbox"/> Clear Score 2 | <input type="checkbox"/> Clear Score 2 |
| <input type="checkbox"/> Clear Score 3 | <input type="checkbox"/> Clear Score 3 |
| LONG-TERM STORAGE AND RETRIEVAL (Glr) | SHORT-TERM MEMORY (Gsm) |
| WIIN COG Long-Term Retrieval (Glr) 77 <input checked="" type="checkbox"/> Clear Score 1 | WISC-V Working Memory Index (Gsm) 79 <input checked="" type="checkbox"/> Clear Score 1 |
| <input type="checkbox"/> Clear Score 2 | <input type="checkbox"/> Clear Score 2 |
| <input type="checkbox"/> Clear Score 3 | <input type="checkbox"/> Clear Score 3 |
| VISUAL PROCESSING (Gv) | SPATIAL PROCESSING (Gs) |
| WISC-V Visual Spatial Index (GvVI) 95 <input checked="" type="checkbox"/> Clear Score 1 | Auditory Processing (Gs) 92 <input checked="" type="checkbox"/> Comp |
| <input type="checkbox"/> Clear Score 2 | <input type="checkbox"/> Clear Score 2 |
| <input type="checkbox"/> Clear Score 3 | <input type="checkbox"/> Clear Score 3 |
| PROCESSING SPEED (Gs) | |
| WISC-V Processing Speed Index (Gs) 94 <input checked="" type="checkbox"/> Clear Score 1 | |
| <input type="checkbox"/> Clear Score 2 | |
| <input type="checkbox"/> Clear Score 3 | |

There are four possible areas of cognitive weakness that may suggest deficits related to the reported academic difficulties as well as three areas of strength. However, because these tests are not designed for English learners, for the areas of suspected weakness it is necessary to generate additional information and data to cross-linguistically confirm that they are true deficits.

SLD Identification with an English Learner: A Case Study

Data Organizer and Score Summary
Release: 2.3

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

WISC-V WISC-IV WPPSI-IV WIAT-III WI IV CQG WI IV ACH WI IV OL KABC-II KTEA-3 CAS2 DAS-II SBS

Guidelines for Selecting Best Composite Scores for SLD Evaluation

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After you have made your selections, click the "S&W Indicator" button to continue with additional steps for conducting PSW analyses.

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

| | | | |
|--|----|--------------------------|---------------|
| WISC-V Verbal Comprehension Index (GcVI) | 76 | <input type="checkbox"/> | Clear Score 1 |
| | | <input type="checkbox"/> | Clear Score 2 |
| | | <input type="checkbox"/> | 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.

| | | | |
|-------------------------------------|----|--------------------------|---------------|
| WI IV CQG Long-Term Retrieval (Glr) | 77 | <input type="checkbox"/> | Clear Score 1 |
| | | <input type="checkbox"/> | Clear Score 2 |
| | | <input type="checkbox"/> | 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.

| | | | |
|------------------------------------|----|-------------------------------------|---------------|
| WISC-V Visual Spatial Index (GvSI) | 95 | <input checked="" type="checkbox"/> | Clear Score 1 |
| | | <input type="checkbox"/> | Clear Score 2 |
| | | <input type="checkbox"/> | Clear Score 3 |

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

| | | | |
|------------------------------------|----|-------------------------------------|---------------|
| WISC-V Processing Speed Index (Gs) | 94 | <input checked="" type="checkbox"/> | Clear Score 1 |
| | | <input type="checkbox"/> | Clear Score 2 |
| | | <input type="checkbox"/> | Clear Score 3 |

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.

| | | | |
|------------------------------------|----|--------------------------|---------------|
| WISC-V Auditory Memory Index (Gsm) | 79 | <input type="checkbox"/> | Clear Score 1 |
| | | <input type="checkbox"/> | Clear Score 2 |
| | | <input type="checkbox"/> | Clear Score 3 |

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

| | | | |
|--|--|--------------------------|---------------|
| | | <input type="checkbox"/> | Clear Score 1 |
| | | <input type="checkbox"/> | Clear Score 2 |
| | | <input type="checkbox"/> | Clear Score 3 |

Strengths do not support disability identification and therefore do not require any further validation. Only areas of possible deficit need to be re-evaluated in the native language (e.g., via use of native language tests, interpreters/translators, etc.). Scores that are average or better do not need to be re-evaluated.

SLD Identification with an English Learner: A Case Study

Data Organizer and Score Summary
Release: 2.3

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

WISC-V WISC-IV WPPSI-IV WIAT-III WI IV CQG WI IV ACH WI IV OL KABC-II KTEA-3 CAS2 DAS-II SBS

Guidelines for Selecting Best Composite Scores for SLD Evaluation

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After you have made your selections, click the "S&W Indicator" button to continue with additional steps for conducting PSW analyses.

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

| | | | |
|--|----|-------------------------------------|---------------|
| WISC-V Verbal Comprehension Index (GcVI) | 76 | <input checked="" type="checkbox"/> | Clear Score 1 |
| | | <input type="checkbox"/> | Clear Score 2 |
| | | <input type="checkbox"/> | 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.

| | | | |
|-------------------------------------|----|--------------------------|---------------|
| WI IV CQG Long-Term Retrieval (Glr) | 77 | <input type="checkbox"/> | Clear Score 1 |
| | | <input type="checkbox"/> | Clear Score 2 |
| | | <input type="checkbox"/> | 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.

| | | | |
|------------------------------------|----|--------------------------|---------------|
| WISC-V Visual Spatial Index (GvSI) | 95 | <input type="checkbox"/> | Clear Score 1 |
| | | <input type="checkbox"/> | Clear Score 2 |
| | | <input type="checkbox"/> | Clear Score 3 |

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

| | | | |
|------------------------------------|----|--------------------------|---------------|
| WISC-V Processing Speed Index (Gs) | 94 | <input type="checkbox"/> | Clear Score 1 |
| | | <input type="checkbox"/> | Clear Score 2 |
| | | <input type="checkbox"/> | 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.

| | | | |
|-----------------------------------|----|--------------------------|---------------|
| WISC-V Fluid Reasoning Index (Gf) | 82 | <input type="checkbox"/> | Clear Score 1 |
| | | <input type="checkbox"/> | Clear Score 2 |
| | | <input type="checkbox"/> | 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.

| | | | |
|-----------------------------------|----|--------------------------|---------------|
| WISC-V Working Memory Index (Gsm) | 79 | <input type="checkbox"/> | Clear Score 1 |
| | | <input type="checkbox"/> | Clear Score 2 |
| | | <input type="checkbox"/> | Clear Score 3 |

In addition, because Gc is itself "language," it cannot be compared fairly to native English speaker norms to determine whether it is a strength or weakness even when scores are deemed "valid" using the C-LIM. Thus, in the case, additional procedures must be employed to determine whether Gc is actually a true weakness or not and whether it does or does not require re-evaluation.

SLD Identification with an English Learner: A Case Study

Interpretive Problems with Gc Scores with English Learners

Because Gc is, by definition, comprised of cultural knowledge and language development, the influence of these factors cannot be separated from tasks designed to measure them. Thus, unless exposure to English is a controlled variable in a test's norm sample and the sample includes many different languages, *Gc scores for ELLs always remain at risk for inequitable interpretation even when the overall pattern of scores within the C-LIM is determined to be valid.*

For example, a Gc score of 76 would be viewed as "deficient" relative to a norm sample comprised primarily of native English speakers. Moreover, testing in the native language doesn't solve this problem because current native-language tests treat ELs as being all the same (they aren't), as if being behind in English is only temporary (it isn't), as if the country they come from is important (it's not), and as if five years of English learning makes them native English speakers (it doesn't).

Therefore, practitioners must find and rely on a "true peer" comparison group such as that which is formed within the High Culture/High Language cell of the C-LIM to help *ensure that ELLs are not unfairly regarded as having either deficient Gc ability or significantly lower overall cognitive ability*—conditions that may simultaneously decrease identification of SLD and increase suspicion of ID and speech impairment.

SLD Identification with an English Learner: A Case Study

Determining if and when to re-test Gc via the C-LIM

Re-evaluation of suspected areas of weakness is necessary to provide cross-linguistic confirmation of potential deficits in functioning. A disability cannot be identified in an English learner if the observed difficulties occur only in one language. Even then, deficits that are identified in both languages are not definitive evidence of dysfunction and evaluation of expectations for native language performance is as relevant for native language evaluation as it is for evaluation in English.

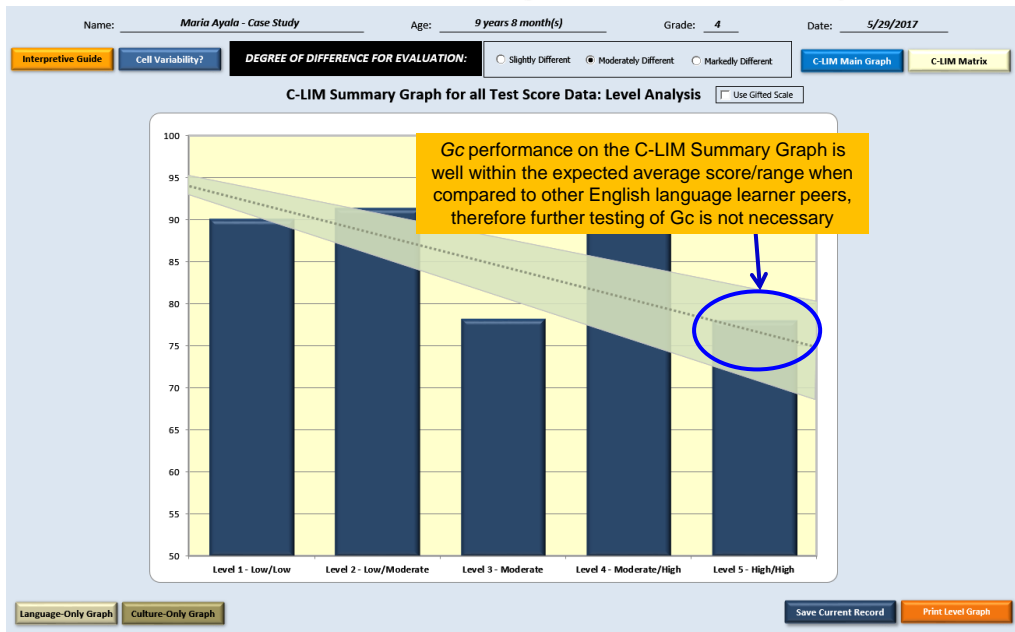
Because of the nature of Gc, it should be treated slightly differently when it comes to re-evaluation as compared to other cognitive abilities. The following guidelines from the best practice recommendations apply specifically to Gc:

- **Review results from testing in English and identify domains of suspected weakness or difficulty:*
 - a. *For Gc only, evaluate weakness according to high/high cell in C-LIM or in context of other data and information*
- **For Gc only:*
 - a. *If high/high cell in C-LIM is within/above expected range, consider Gc a strength and assume it is at least average (re-testing is not necessary)*
 - b. *If high/high cell in C-LIM is below expected range, re-testing of Gc in the native language is recommended*
- *For Gc only, scores obtained in the native language should only be interpreted relative to developmental and educational experiences of the examinee in the native language and only as compared to others with similar developmental experiences in the native language.*

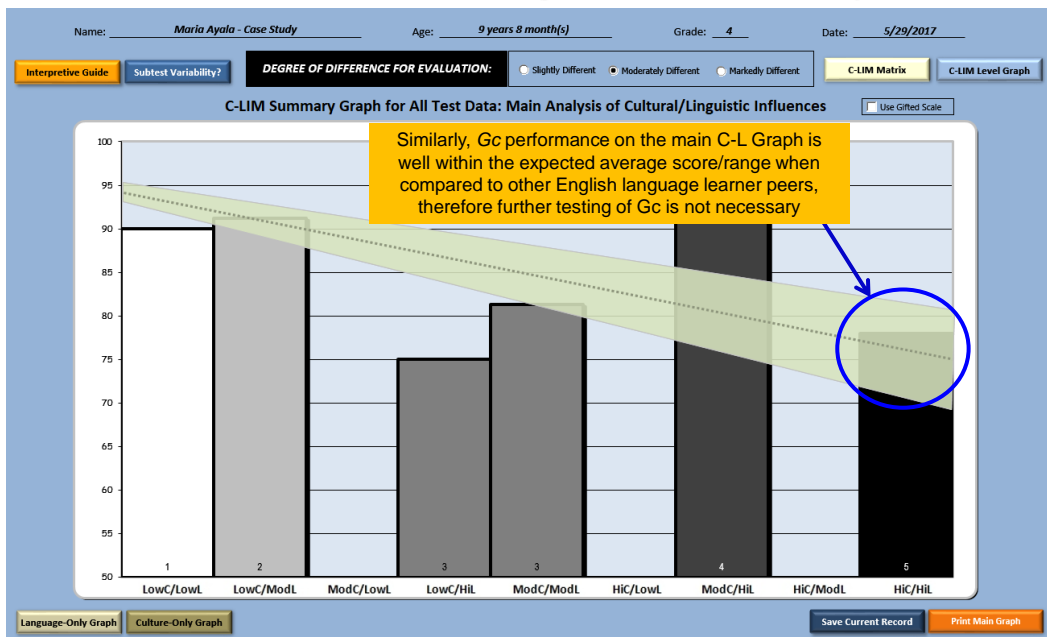
It is important that the actual, obtained Gc score, regardless of magnitude, be reported when required, albeit with appropriate nondiscriminatory assignment of meaning, and that it be used for the purposes of instructional planning and educational intervention.

**If Gc is evaluated with the Ortiz PVAT, use the actual score obtained from the English Learner norms (NOT the English Speaker norms) to determine if it is an area of weakness. If the score indicates a weakness, it should then be further re-evaluated in the native language.*

SLD Identification with an English Learner: A Case Study



SLD Identification with an English Learner: A Case Study



SLD Identification with an English Learner: A Case Study

Interpretive Problems with Gc Scores with English Learners

Although the C-LIM helped determine that Gc is NOT an area of weakness, further evaluation and interpretation is complicated because of the low magnitude of the score (i.e., SS=76). Other corrections are necessary to prevent discriminatory decisions, particularly in evaluation of SLD or SLI. However, use of the Ortiz PVAT provides a simple and more direct solution to all of these problems.

| | English | Native Lang. | Valid? | Interpretation? |
|-------|---------|--------------|--------|-----------------|
| - Gc | 76 | - | No | S |
| - Gf | 82 | - | ? | ? |
| - Glr | 77 | - | ? | ? |
| - Gsm | 78 | - | ? | ? |
| - Gv | 98 | - | Yes | S |
| - Ga | 92 | - | Yes | S |
| - Gs | 94 | - | Yes | S |

These are the seven major CHC broad abilities typically measured for evaluation of SLD, particularly within a Processing Strengths and Weaknesses (PSW) approach. The parentheses contain the corresponding five WISC indexes that are equivalent to the CHC broad abilities.

Since the aggregate score in the C-LIM for Tier 5 (i.e., the High/High cell where all Gc tests are classified) was within the expected range corresponding to the selected degree of difference deemed most appropriate, it should be considered a strength despite the fact that the magnitude is only 76 and that it isn't technically a valid measure of intrinsic language-related abilities.

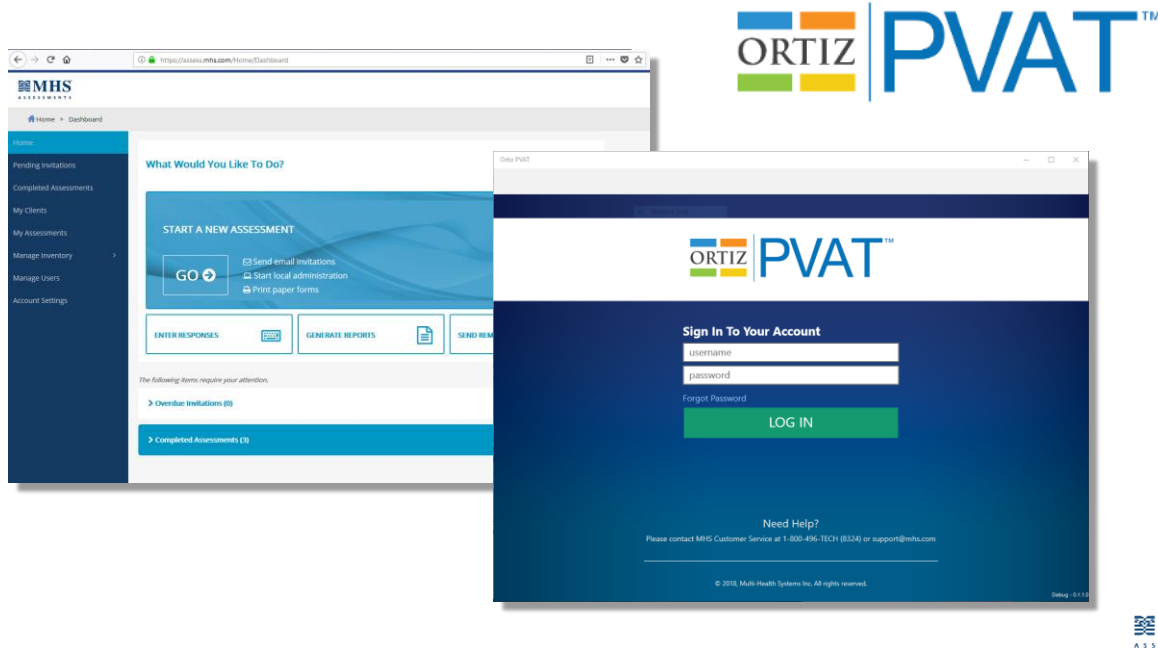
SLD Identification with an English Learner: A Case Study

Resolving Problems with Gc Scores for ELs: The Ortiz PVAT

Clearly, the preceding procedures necessary to address validity issues related to the measurement of Gc and language/culture-related abilities are complicated, somewhat cumbersome, and not very efficient. It may also leave the practitioner in the unenviable position of having to defend a very low score (SS=76) as being technically invalid, but still considered to be an area of processing "strength."

This one issue, more than any other, best highlights the shortcomings of today's tests relative to their failure to provide a true peer comparison group for English learners that would alleviate all of the extra work and potential confusion. There simply is no substitute for being able to make fair and equitable interpretations than comparison to peers with similar developmental experiences.

That said, there is in fact an easier way to do all of this. In response to the many difficulties posed by these issues, *a new test has been developed with dual-norm samples, including one specifically for English learners that yields valid Gc scores for English learners of any language background and level of English exposure—and that test is the Ortiz PVAT.*



Fairness and English Learners: Ensuring True Peer Comparability

Stratification Variables in Dual Standardization Norm Samples of the Ortiz PVAT

English Speakers ($N = 1,530$)

- Ages 2:6 to 22:11
- Gender: equal split
- Stratification:
 - Geographic region
 - Parental education level (PEL)
 - Race/ethnicity

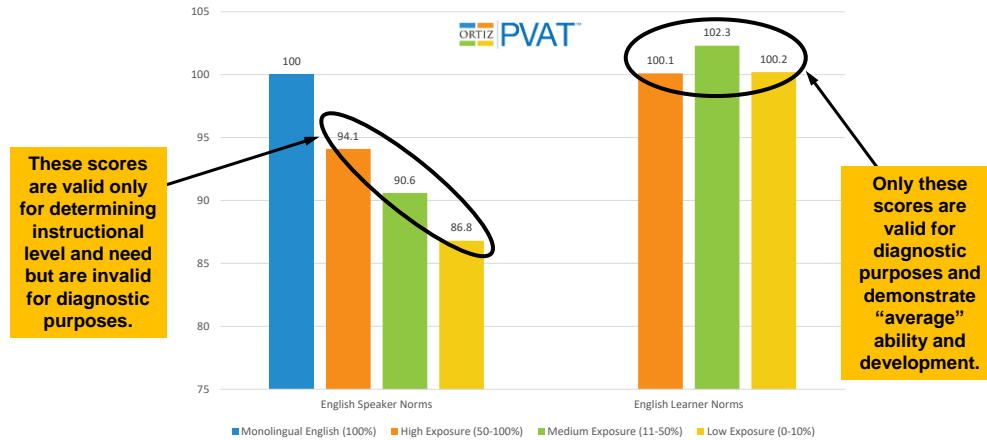
English Learners ($N = 1,190$)

- Ages 2:6 to 22:11
- Gender: equal split
- Stratification:
 - Geographic region
 - Parental education level (PEL)
 - Language spoken at home (53 different languages)
 - Proportion of lifetime exposure to English (i.e., opportunity to learn English):
 - 11 categories for length of exposure to English
 - 0-6 months up to 16+ years

Inclusion of these variables in the stratification of the EL Norm Sample is a completely unique feature of the Ortiz PVAT not found in any other test.

The Ortiz PVAT – Advances in fairness and testing

Developmental Language/Exposure-based Comparison Provides Validity and Fairness for ELs



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The Ortiz PVAT – Fairness for ALL Learners

Removal of all variance due to language results in no influence of race or ethnicity

Norm sample for native English speakers demonstrates negligible effect of race/ethnicity.

| Form | Racial/Ethnic Group | N | M | SD | F (df) | p | Pairwise Comparisons ($p < .01$) | Partial η^2 |
|--------|---------------------|-------|-------|------|----------------|------|------------------------------------|------------------|
| Form A | Black | 280 | 99.4 | 15.2 | 2.60 (3, 1523) | .051 | ns | .005 |
| | Hispanic | 126 | 99.5 | 15.4 | | | | |
| | White | 1,018 | 100.5 | 15.3 | | | | |
| | Other | 106 | 96.3 | 15.3 | | | | |
| Form B | Black | 280 | 99.6 | 15.1 | 2.47 (3, 1523) | .060 | ns | .005 |
| | Hispanic | 126 | 99.7 | 15.3 | | | | |
| | White | 1,018 | 100.6 | 15.2 | | | | |
| | Other | 106 | 96.4 | 15.2 | | | | |

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The Ortiz PVAT – Fairness for ALL English Learners

First language learned (L1) does not alter the sequence of learning English (L2)

English language acquisition is an invariant process, irrespective of the native language

| Form | Language Spoken | N | M | SD | F (df) | p | Pairwise Comparisons ($p < .01$) | Partial η^2 |
|--------|------------------------------------|-----|-------|------|-------------------|------|--|---------------------|
| Form A | Spanish & Spanish Creole | 872 | 101.5 | 15.5 | 1.63 (3, 1183) | .181 | ns | .004 |
| | Indo-European Languages | 161 | 99.4 | 15.7 | | | | |
| | Asian & Pacific Islander Languages | 129 | 98.8 | 15.4 | | | | |
| | All Other Languages | 28 | 99.9 | 15.4 | | | | |
| Form B | Spanish & Spanish Creole | 872 | 101.7 | 15.5 | 1.52 (3, 1183) | .208 | ns | .004 |
| | Indo-European Languages | 161 | 99.8 | 15.7 | | | | |
| | Asian & Pacific Islander Languages | 129 | 99.0 | 15.4 | | | | |
| | All Other Languages | 28 | 99.9 | 15.4 | | | | |

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The Ortiz PVAT – Recommended Applications

Pre-school Screening and Evaluation – dual norms permit evaluation of basic language development (receptive vocabulary) in very young children (minimum age: 2 years, 6 months) in both native English speakers and English learners prior to the beginning of formal instruction.

Progress Monitoring of English Language Proficiency – many tests, for example those used to monitor compliance with Title III ELA requirements are not well designed for that purpose and give misleading results regarding progress and growth and no information relative to the acquisition of BICS vs. CALP.

Determination of Instructional Level – the Assessment Report indicates the linguistically appropriate level of instruction and the degree of intensity required to assist the student in making progress toward grade-level standards and expectations. Specific instructional strategies are also provided.

Progress monitoring of Reading and Writing Vocabulary – the Progress Report provides data for evaluating increases in receptive vocabulary that may reflect relative progress in response to specific interventions that are being employed.

Evaluation of Growth in General Language Ability – unlike tests that do not allow measurement of growth, a specific index documenting actual growth in English vocabulary/language acquisition across short and long intervals is provided.

Development of Intervention/Treatment Strategies – performance is linked directly to specific and customized recommendations for language-based intervention and treatment strategies relative to true peers.

Diagnostic and Disability Evaluation – provides the only norm-referenced “true peer” comparison necessary for evaluating “difference vs. disorder” in general language-related disabilities/disorders related to vocabulary acquisition.

Assessment Report from the Ortiz PVAT



ORTIZ PVAT™
 ORTIZ PICTURE VOCABULARY ACQUISITION TEST™
 Samuel O. Ortiz, Ph.D.

Assessment Report

Examinee Information

| | |
|--|-----------------------|
| Name/ID: | Josephine Cruz |
| Age: | 15 years 6 months |
| Gender: | Female |
| Date of Birth: | July 18, 2003 |
| Language(s) Spoken at Home: | Unspecified |
| Age at First Exposure to English: | 14 years |
| Exposure to English: | 7% of life |
| Primary Language of Instruction: | Unspecified |
| School Grade: | 10 |

Assessment Information


| | |
|-----------------------------------|--------------------------------------|
| Administration Date: | January 20, 2019 |
| Examiner Name: | A |
| Form Administered: | English Learner Norms |
| Norms Used: | (accounting for exposure to English) |
| Number of Items Presented: | 24 |
| Number of Items Omitted: | 0 |

This computerized report provides quantitative information about the performance of the examinee. Additional interpretive information can be found in the *Ortiz PVAT Technical Manual*. This Assessment Report is intended for use by qualified evaluators only, and is not to be used as the sole basis for clinical diagnosis or intervention.



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 P.O. Box 950, North Tonawanda, NY 14120-0950
 3770 Victoria Park Ave., Toronto, ON M2H 3M6

Assessment Report from the Ortiz PVAT



Assessment Report - Form A for Josephine Cruz
 Admin Date: 01/20/2019

About the Ortiz PVAT™

The Ortiz Picture Vocabulary Acquisition Test (Ortiz PVAT) is a test that assesses the ability of a child, youth, or young adult (aged 2 years 6 months to 22 years 11 months) to comprehend the meaning of spoken English words (i.e., receptive vocabulary). It is appropriate for both native English speakers and English learners. In addition, it can be used to measure and track growth and development in English vocabulary, investigate possible speech-language difficulties, and guide instruction and educational intervention.

Vocabulary Acquisition and Development

This section of the report compares the examinee's scores against the **English Learner norms** to assess vocabulary acquisition in English relative to other English learners of the same age who have similar exposure to English. This comparison assists in differentiating the normal process of learning another language from an underlying language disorder. Please see the *Ortiz PVAT Technical Manual* for more information on the importance of using English Learner norms that account for exposure to English.


ENGLISH LEARNER NORMS

| Ortiz PVAT Scores | English Learner Norms* |
|--|------------------------|
| Raw Score | 28 |
| Standard Score (95% Confidence Interval) | 72 (68-76) |
| Percentile | 3rd |
| Stanine | 1 |
| Age Equivalent (Years/Months) | 5:3 |
| Classification | Very Low |

*Compared to other English learners of the same age who have similar exposure to English.

Interpretation

- Compared to same-age peers who have been exposed to English for 3% of their lives (**English Learner norms**), Josephine's ability to recognize spoken English words is **very low**.
- Because her performance is well below that of other English learners with similar exposure to English, an **underlying language difficulty may be indicated** if such difficulties are supported by additional converging evidence, including identification of similar difficulties in the individual's native language.

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Assessment Report from the Ortiz PVAT



Assessment Report – Form A for Josephine Cruz
Admin Date: 01/02/2019

Instructional Level

This section of the report compares the examinee's scores against the **English Speaker norms** to assess instructional needs. A comparison to native English speakers provides a baseline of current functioning relative to peers from the same age group and can be used to inform instructional level or services required. Please see the *Ortiz PVAT Technical Manual* for more information on the use of English Speaker norms for English learners.

Instructional level recommendations:

- With respect to the level of instruction required for continued academic growth and success in English, Josephine's vocabulary acquisition is **extremely below** the level typically associated with same-age native English-speaking peers (**English Speaker norms**).

- Classroom instruction requires substantial modification** to accommodate her level of English comprehension. **Intensive interventions are needed** to assist in making further progress toward grade-level standards in English.

Important Note: English language experiences should not be viewed as a replacement or substitute for continued native-language development which may offer better educational outcomes for Josephine, in both English and her native language.

Intervention Recommendations (English and Native Language)

Instructional strategies for English language development:

- Provide significant opportunities to hear and use content vocabulary in the English language:
 - Facilitate language learning through speech production and interaction so that the learning process is active rather than passive. Support and encourage active participation rather than just presenting information.
 - Create interactive educational settings where there is greater exposure to English language models that focus primarily on social conversations. Such interactive environments should focus on providing significant opportunities for using language, as well as frequent and corrective feedback that is appropriate for the student's current vocabulary level.
- Increase contextualization of information:
 - Use clear, consistent, and basic relational language (e.g., descriptions of simple characteristics that illustrate similarities for objects, key vocabulary words, and ideas, especially when introducing new or more complex ways of using social and academic language in English and the native language (if the student speaks their native language)).
 - Provide frequent opportunities for scaffolding, focusing primarily on social language acquisition in English via the use of rich, visual imagery with a lot of contextual information (e.g., hand gestures, pointing to surrounding objects) in order to aid comprehension. This technique may include requiring the student to access information that they have understood or been taught previously.
 - Provide frequent opportunities for drawing, writing, and expressions in the English language in order to connect the student's own ideas primarily to social interactions, but also to academic settings.
- Use visual aids and graphic organizers (e.g., picture dictionaries, icons, or flowcharts) during instruction to tag and connect vocabulary and ideas.
- Allow the student to incorporate their own experiences into learning situations.
- Encourage the student to express thoughts and ideas by using their own words in English.
- Provide increased opportunities for the student to connect the English language with ideas or concepts within the context of academic and social settings.
- Provide increased opportunities for the student to read aloud in English in order to practice effective language use and appropriate expression.

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Assessment Report from the Ortiz PVAT



Assessment Report – Form A for Josephine Cruz
Admin Date: 01/02/2019

Intervention Recommendations (English and Native Language) continued...

- Encourage the student to create picture dictionaries using illustrations and images to support semantic language development and acquisition of English vocabulary.
- Categorize words by concept or by similar features to develop a network of connections.
- Teach the student to monitor their understanding and ask questions while reading.
- Present the student with illustrations of people engaged in various activities. Ask the student to dictate a story in English about the people and watch while they transcribe it in front of you.
- Ask direct, literal questions (e.g., who, what, where, when) about a picture with a lot of context to collaboratively build a structured definition or mental concept. Have the student respond in English as much as possible.
- Create stories and promote social language by encouraging the student's use of story maps and illustrations as well as written/spoken English.
- Employ the Whole-Part-Whole instructional model (Roseberry-McKibbin, 2008):
 - Provide the student with the "big picture" and support semantic relationships or overlaps with the parts.
 - Opt for small group instruction, encourage students to interact with one another during learning experiences instead of passive listening.
- Use thematic instructional units focusing on topics relevant to the student's interests that are aligned with the classroom curriculum.
- Interpret or decode written English materials for the student. Read instructions aloud and one step at a time to ensure comprehension.
- Model effective questioning and conversational practices in English, and gradually encourage peer-led discussions using these skills.

Practical strategies for intervention:

- Focus on teaching concepts or strategies that help the student learn new social and academic English words.
- Expand the student's social and academic English vocabulary within familiar and naturalistic contexts. In other words, create authentic communication situations that focus on meaning and comprehension rather than just the structure of language.
- Provide increased opportunities for interactions with English-speaking models for social and academic language communication.
- Encourage active peer-to-peer communication in English (e.g., discussions, acting out a concept or scenario) to balance passive listening of oral information (e.g., rote lesson plans, videos).
- Frequently repeat and review newly acquired English vocabulary words.
- Relate new words to previously learned words to accelerate acquisition. Help students relate or connect new information to what they already know.
- Carefully listen and respond to the student's communication attempts.


Instructional strategies in the native language to assist in English language development:

- Read aloud to the student developmentally appropriate passages from bilingual books, if they understand their native language and if there are native language models available at home.
- Create opportunities to support cross-linguistic learning from the student's native language to English. For example, "mama" sounds fairly similar across many languages. For languages that share roots with English, this can be accomplished through cognates (e.g., words from different languages that share both form and meaning [e.g., *avocado* in Spanish; *lampara* in Polish; *aligatore* in Italian; *alligator* in German]).
- Foster exposure to the student's native language through media (e.g., books, songs, television, or movies) and conversations with native language models (e.g., family, friends, and relatives).

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Assessment Report from the Ortiz PVAT


Assessment Report – Form A for Josephine Cruz
Admin Date: 01/20/2019

Vocabulary Type Analysis

This section of the report presents an analysis of the examinee's mastery of the various parts of speech and word types.

PARTS OF SPEECH

An examination of the examinee's vocabulary relative to various parts of speech may provide additional information regarding expected growth and progress. The general pattern of English language acquisition for both native English speakers and English learners is largely the same. In general, nouns tend to be acquired first, followed by verbs, adjectives, adverbs, and prepositions. Although the sequence is unchanged, the lack of opportunity for sustained and advanced English-language interactions may alter the age at which the parts of speech are acquired in English learners as compared to native English speakers.


| Part of Speech | Number Presented | Number Correct | Percent Correct |
|----------------|------------------|----------------|-----------------|
| Noun | 18 | 14 | 78% |
| Verb | 5 | 4 | 80% |
| Adjective | 1 | 1 | 100% |
| Adverb | 0 | n/a | n/a |
| Preposition | 0 | n/a | n/a |

WORD TYPES

The Ortiz PVAT divides words into two categories: Basic Interpersonal Communicative Skills (BICS) and Cognitive Academic Language Proficiency (CALP). Each category is then subdivided into three ranges: Emergent, Intermediate, and Advanced. The categories are arranged in an ascending order of development that describes the type of broad English proficiency and general development exhibited by the examinee.

| Word Type | Number Presented | Number Correct | Percent Correct |
|-------------------|------------------|----------------|-----------------|
| Emergent BICS | 13 | 13 | 100% |
| Intermediate BICS | 11 | 6 | 55% |
| Advanced BICS | 0 | n/a | n/a |
| Emergent CALP | 0 | n/a | n/a |
| Intermediate CALP | 0 | n/a | n/a |
| Advanced CALP | 0 | n/a | n/a |

| Age | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19+ |
|-----------|---------------|-------------------|---------------|---------------|-------------------|---------------|---|---|----|----|----|----|----|----|----|----|----|-----|
| Grade | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | | | | | |
| Word Type | Emergent BICS | Intermediate BICS | Advanced BICS | Emergent CALP | Intermediate CALP | Advanced CALP | | | | | | | | | | | | |


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Date Printed: 01/20/2019 | End of Report 6

Progress Report from the Ortiz PVAT



Progress Report

Examinee Information (Based on the most recent administration)

Name/ID: Jeremi Yonge
Gender: Female
Date of Birth: September 16, 2009
Language Spoken at Home: English
Primary Language of Instruction: English
Norms Used: English Speaker Norms

Assessment Information

| | Admin 1 | Admin 2 | Admin 3 | Admin 4 | Admin 5 |
|--------------------------------|--------------|--------------|--------------|--------------|--------------|
| Administration Date | May 14, 2018 | Aug 21, 2018 | Nov 14, 2018 | Feb 16, 2019 | May 18, 2019 |
| Age at Testing (Years:Months): | 7:7 | 7:10 | 8:1 | 8:4 | 8:7 |
| Grade: | 2 | 2 | 3 | 3 | 3 |
| Form Administered: | A | A | A | A | A |
| Number of Items Presented: | 34 | 35 | 42 | 13 | 31 |
| Number of Items Correct: | 0 | 0 | 0 | 0 | 0 |
| Examiner Name: | Admin 1 | Admin 2 | Admin 3 | Admin 4 | Admin 5 |

About the Ortiz PVAT™

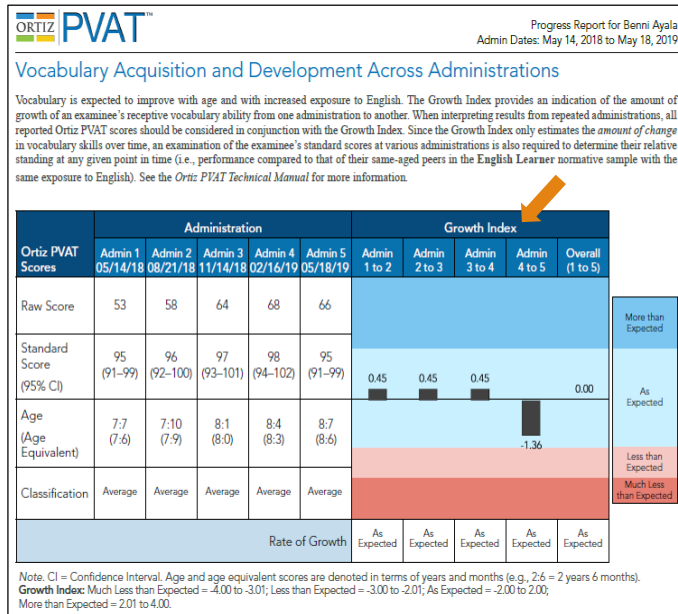
The Ortiz Picture Vocabulary Acquisition Test (Ortiz PVAT) is a test that assesses the ability of a child, youth, or young adult (aged 2 years 6 months to 22 years 11 months) to comprehend the meaning of spoken English words (i.e., receptive vocabulary). In addition, it can be used to measure and track growth and development in vocabulary, investigate possible speech-language difficulties, and guide instruction and educational intervention. This computerized report compares the performance of the examinee across a maximum of five administrations. For detailed information about any given administration, please refer to the particular Ortiz PVAT Assessment Report. Additional interpretive information can be found in the Ortiz PVAT Technical Manual.

This Progress Report is intended for use by qualified evaluators only, and is not to be used as the sole basis for clinical diagnosis or intervention.

Alternate forms of the test (Form A and B) are fully parallel and allow for repeated testing in cases where progress monitoring or evaluation of growth is desired.

In such cases, a Progress Report can be generated that permits comparison of up to 5 different administration of the same examinee.

Progress Report from the Ortiz PVAT



The Growth Index provides an indication of actual change or true growth across two or more administrations.

It is useful for both progress monitoring purposes as well as for determining whether an individual's language acquisition is typical or not as compared to other English learners of the same age.

Performance Across Different Norm Sample Comparisons

How much of a difference does "true language peer" comparison make for diagnostic decisions?

| | | EL vs. EL | EL vs. ES | EL vs. SS |
|---------------------------------|-----|------------|------------------|------------------|
| Grade | Age | Ortiz PVAT | WMLS-III English | WMLS-III Spanish |
| 4 | 9 | 97 | 64 | 40 |
| 3 | 8 | 87 | 69 | 43 |
| 4 | 10 | 105 | 63 | 40 |
| 2 | 7 | 84 | 58 | 42 |
| 1 | 6 | 98 | 45 | 104 |
| 5 | 10 | 92 | 42 | 88 |
| K | 5 | 71 | 45 | 40 |
| 4 | 9 | 97 | 61 | 41 |
| 4 | 9 | 95 | 55 | 42 |
| 4 | 9 | 94 | 40 | 61 |
| 2 | 7 | 92 | 65 | 48 |
| 1 | 6 | 104 | 68 | 55 |
| 5 | 9 | 84 | 40 | 73 |
| 1 | 7 | 89 | 43 | 59 |
| Average= | | 92 | 54 | 56 |
| Percentile Rank = | | 30th | 0.1st | 0.1st |
| Potential False Positive Rate = | | 7-21% | 100% | 86% |

EL = English Learner
ES = English speaker
SS = Spanish speaker

WMLS-III Oral Language
Oral Comprehension
Picture Vocabulary

L1 dominance approach = 12/14 with language impairment

L2 dominance approach = 14/14 with language impairment

True peer comparison = 3/14 with language impairment*

*Of the 3 scores in the true peer comparison, two are very close to being WNL (SEM=2) and may not actually represent a disability.

Without true peer comparison, false positive error rates for misidentification of ELs could be exceptionally high.

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SLD Identification with an English Learner: A Case Study

WISC-V/WJ IV/VIAT-III XBA DATA FOR Maria Ayala
DOE: 5/29/2017 DOB: 9/6/2007 Grade: 4

WECHSLER INTELLIGENCE SCALE FOR CHILDREN-V

| | | | |
|-----------------------------------|-----------|-------------------------------|-----------|
| <u>Verbal Comprehension Index</u> | <u>76</u> | <u>Fluid Reasoning Index</u> | <u>82</u> |
| Similarities | 5 | Matrix Reasoning | 7 |
| Vocabulary | 6 | Figure Weights | 7 |
| <u>Working Memory Index</u> | <u>79</u> | <u>Processing Speed Index</u> | <u>94</u> |
| Digit Span | 5 | Coding | 9 |
| Picture Span | 7 | Symbol Search | 8 |

Although we are adding the Ortiz PVAT at this point in the evaluation, it would have been easiest to simply include it as a standard part of any battery particularly because it can be administered to any individual to generate a valid Gc score, and in the case of ELs, it will also address the Gc problem that will always exist and provide that information in an interpretive summary report.

WECHSLER INDIVIDUAL ACHIEVEMENT TEST-III

| | | | | | |
|----------------------|-----------|------------------------------|-----------|---------------------------|-----------|
| <u>Basic Reading</u> | <u>94</u> | <u>Reading Comprehension</u> | <u>76</u> | <u>Written Expression</u> | <u>92</u> |
| Word Reading | 92 | Reading Comprehension | 76 | Spelling | 100 |
| Pseudoword Decoding | 98 | Oral Reading Fluency | 80 | Sentence Composition | 86 |
| | | | | Essay Composition | 93 |

WOODCOCK JOHNSON-IV TESTS OF COGNITIVE ABILITY

| | | | | | |
|----------------------------|-----------|-----------------------------|-----------|------------------------------|-----------|
| <u>Auditory Processing</u> | <u>91</u> | <u>LT Storage/Retrieval</u> | <u>77</u> | <u>Ortiz PVAT (EL Norms)</u> | <u>93</u> |
| Phonological Processing | 99 | Story Recall | 79 | | |
| Nonword Repetition | 84 | Visual-Auditory Learning | 75 | | |

SLD Identification with an English Learner: A Case Study

Avoiding Interpretive Problems by Use of the Ortiz PVAT

Derivation of an Ortiz PVAT score using the English learner norms eliminates the Gc problem completely. The Ortiz PVAT score simply replaces any Gc/language-related/verbal ability score because it was derived precisely on "true peers" and therefore inherently valid in terms of both meaning/classification and actual magnitude (e.g., 90 - 109 = average).

| | English | Spanish | Valid? | Interpretation? |
|-------------------|---------|---------|--------|-----------------|
| - Gc | 76 | - | No | ? |
| - Gf | 82 | - | ? | ? |
| - Glr | 77 | - | ? | ? |
| - Gsm | 78 | - | ? | ? |
| - Gv | 98 | - | Yes | S |
| - Ga | 92 | - | Yes | S |
| - Gs | 94 | - | Yes | S |
| - Gc (Ortiz PVAT) | 93 | - | Yes | S |

Use of the Ortiz PVAT requires no native language confirmation since the score is derived from norms that control for amount of exposure to English and is based on a true peer comparison group for both English speakers and English learners. Therefore, it is valid and may be interpreted directly as a strength or weakness without requiring any further cross-linguistic validation. It also eliminates the potential confusion and difficulty in having to explain why a low score (e.g. 76) is a strength, not a weakness.

Data Entry - Other
Release: 2.3

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

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

Start Tab Help Index Data Organizer Data Organizer Graph C-LIM Analyzer

Next Step

Notes on Using Other Test Data

This tab permits use of scores for PSW analysis from tests/batteries that are not available in X-BASS' current core test tabs or drop down menus. Type in the name of a composite or subtest in the appropriate section, enter the score (Scaled or Standard Scores only—for T-Scores, use the converter at the bottom of the tab), and indicate whether it is a subtest or composite score. Click the corresponding button to transfer the data directly to the Data Organizer where it can be selected for use in subsequent PSW analysis. Note that composites/subtests entered into X-BASS via this tab cannot be evaluated for cohesion, cannot be combined with other composites to form XBA composites, and cannot be evaluated within the C-LIM Analyzer. As such, caution should be exercised whenever a decision is made to include and utilize scores entered on this tab in an evaluation of SLD. **NOTE: DATA ENTERED HERE WILL NOT BE SAVED UNTIL IT HAS BEEN TRANSFERRED TO THE DATA ORGANIZER AND ONLY AFTER THE ACTIVE DATA RECORD HAS BEEN SAVED TO UPDATE CHANGES.**

For cognitive domains, enter the name/score of a composite. For academic domains, enter the name/score of a composite or subtest and indicate which it is. Click the button to transfer it to the Data Organizer.

CRYSTALLIZED INTELLIGENCE (Gc)
Enter the name and score of the Gc test composite below and click the blue button to transfer it to the Gc domain.
Name of Gc Composite or Subtest: Ortiz PVAT (EL Norms) Score: 93 ☒ Subtest ☐ Composite **Transfer Gc Score** **Clear Gc Score**

FLUID REASONING (Gf)
Enter the name and score of the Gf test composite below and click the blue button to transfer it to the Gf domain.
Name of Gf Composite or Subtest: Score: ☐ Subtest ☐ Composite **Transfer Gf Score** **Clear Gf Score**

LONG-TERM STORAGE AND RETRIEVAL (Glr)
Enter the name and score of the Glr test composite below and click the blue button to transfer it to the Glr domain.
Name of Glr Composite or Subtest: Score: ☐ Subtest ☐ Composite **Transfer Glr Score** **Clear Glr Score**

SHORT-TERM MEMORY (Gsm)
Enter the name and score of the Gsm test composite below and click the blue button to transfer it to the Gsm domain.
Name of Gsm Composite or Subtest: Score: ☐ Subtest ☐ Composite **Transfer Gsm Score** **Clear Gsm Score**

VISUAL PROCESSING (Gv)
Enter the name and score of the Gv test composite below and click the blue button to transfer it to the Gv domain.
Name of Gv Composite or Subtest: Score: ☐ Subtest ☐ Composite **Transfer Gv Score** **Clear Gv Score**

PROCESSING SPEED (Gs)
Enter the name and score of the Gs test composite below and click the blue button to transfer it to the Gs domain.
Name of Gs Composite or Subtest: Score: ☐ Subtest ☐ Composite **Transfer Gs Score** **Clear Gs Score**

OTHER COGNITIVE PROCESS
Enter the name and score of the test composite or subtest below and click the blue button to transfer it to the Data Organizer.
Name of Composite or Subtest: Score: ☐ Subtest ☐ Composite **Transfer Other Score** **Clear Other Score**

Grw-R: BASIC READING SKILLS (BRS)
Enter the BRS name and score, indicate whether it is a subtest or composite, and click the button to transfer it to the BRS domain.
Name of BRS Composite or Subtest: Score: ☐ Subtest ☐ Composite **Transfer BRS Score** **Clear BRS Score**

Grw-R: READING COMPREHENSION (RDC)
Enter the RC name and score, indicate whether it is a subtest or composite, and click the button to transfer it to the RC domain.
Name of RDC Composite or Subtest: Score: ☐ Subtest ☐ Composite **Transfer RDC Score** **Clear RDC Score**

The Ortiz PVAT can be easily entered into the Data Organizer via the "Other Test Data Entry" tab. Simply enter the name of the test (specifying the norms used is helpful), enter the score and click "Transfer Gc Test Composite" to effect the transfer.

Data Organizer and Score Summary
Release: 2.3

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

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

Start Tab Help Index S&W Indicator Data Organizer Graph C-LIM Analyzer

Next Step

Guidelines for Selecting Best Composite Scores for SLD Evaluation

The purpose of this tab is to organize composites and subtests to assist in the selection of those to be used for evaluation of the pattern of strengths and weaknesses in the PSW Analyzer. Test names and scores can not be entered into this tab directly. Rather, this tab provides a summary of test battery and XBA composites that were transferred from other tabs because they were considered the best estimates of CMC abilities, academic areas, and selected neuropsychological domains. Use this tab to select the composites and subtests scores you would like to use in PSW analyses by clicking on the check box to the right of each one in any domain for which there are data. You may select up to two composites for each of the CMC broad ability (e.g., Gc, Gf, Gsm) and neuropsychological (e.g., Executive Functions, Orthographic Processing) domains and up to three scores for each of the academic areas. Note that you may also click on the "Data Organizer Graph" to view or print the information on this tab. For more information on how to select the best scores for use in PSW analyses, click the button to the right.

After you have made your selections, click the "S&W Indicator" button to continue with additional steps for conducting PSW analyses.

CRYSTALLIZED INTELLIGENCE (Gc)
Indicate which composite(s) you wish to use for PSW analyses. No more than two scores can be selected for this domain.
WISC-V Verbal Comprehension Index (Gc-VI) 76 ☐ Test Comp **Clear Score 1**
Ortiz PVAT Score (EL norms) 93 ☒ Test Comp **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.
WISC-V Fluid Reasoning Index (Gf) 82 ☐ Test Comp **Clear Score 1**
Fluid Reasoning (Gf) 91 ☐ Comp **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.
WI IV COG Long-Term Retrieval (Glr) 77 ☐ 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.
WISC-V Working Memory Index (Gsm) 79 ☐ Test Comp **Clear Score 1**
☐ Comp **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.
WISC-V Visual Spatial Index (Gv-VI) 95 ☐ Test Comp **Clear Score 1**
☐ **Clear Score 2**
☐ **Clear Score 3**

OTHER COGNITIVE PROCESS
Indicate which composite(s) you wish to use for PSW analyses. No more than two scores can be selected for this domain.
Auditory Processing (Ga) 92 ☐ Comp **Clear Score 1**
☐ **Clear Score 2**
☐ **Clear Score 3**

PROCESSING SPEED (Gs)
Indicate which composite(s) you wish to use for PSW analyses. No more than two scores can be selected for this domain.
WISC-V Processing Speed Index (Gs) 94 ☐ Test Comp **Clear Score 1**
☐ **Clear Score 2**
☐ **Clear Score 3**

OTHER PROCESSING AREA
Indicate which composite(s) you wish to use for PSW analyses. No more than two scores can be selected for this domain.
☐ **Clear Score 1**
☐ **Clear Score 2**
☐ **Clear Score 3**

The transferred score will appear in any open space in the Gc domain. This permits comparison and individual selection for subsequent use in PSW analysis.

Data Organizer and Score Summary
Release: 2.3

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

WISC-V WAIS-IV WPPSI-IV WIAT-III WIJ IV COG WIJ IV ACH WIJ IV OL KABC-II KTEA-3 CAS2 DAS-II SBS

Guidelines for Selecting Best Composite Scores for SLD Evaluation

The purpose of this tab is to organize composites and subtests to assist in the selection of those to be used for evaluation of the pattern of strengths and weaknesses in the PSW Analyzer. Test names and scores can not be entered into this tab directly. Rather, this tab provides a summary of test battery and XBA composites that were transferred from other tabs because they were considered the best estimates of CHC abilities, academic areas, and selected neuropsychological domains. To use in PSW analyses by clicking on the check box to the right of each one in any domain for which there are Gc, Gf, Gsm and neuropsychological (e.g., Executive Functions, Orthographic Processing) domains and up to "Data Organizer Graph" to view or print the information on this tab. For more information on how to use this tab, click on the "Data Organizer Graph" link in the top right corner.

After you have made your selections, click the "S&W Indicator" button in the top right corner.

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

| | | | |
|---|----|---|---------------|
| WISC-V Verbal Comprehension Index (GcVLI) | 76 | <input checked="" type="checkbox"/> Test Comp | Clear Score 1 |
| Ortiz PVAT Score (EL norms) | 93 | <input type="checkbox"/> Test Comp | Clear Score 2 |
| | | <input type="checkbox"/> Comp | 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.

| | | | |
|--------------------------------------|--|------------------------------------|---------------|
| WIJ IV COG Long-Term Retrieval (Glr) | | <input type="checkbox"/> Test Comp | Clear Score 1 |
| | | <input type="checkbox"/> Comp | Clear Score 2 |
| | | <input type="checkbox"/> Comp | 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.

| | | | |
|-------------------------------------|----|------------------------------------|---------------|
| WISC-V Visual Spatial Index (GvVSI) | 95 | <input type="checkbox"/> Test Comp | Clear Score 1 |
| | | <input type="checkbox"/> Comp | Clear Score 2 |
| | | <input type="checkbox"/> Comp | Clear Score 3 |

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

| | | | |
|------------------------------------|----|------------------------------------|---------------|
| WISC-V Processing Speed Index (Gs) | 94 | <input type="checkbox"/> Test Comp | Clear Score 1 |
| | | <input type="checkbox"/> Comp | Clear Score 2 |
| | | <input type="checkbox"/> Comp | 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.

| | | | |
|-----------------------------------|----|------------------------------------|---------------|
| WISC-V Fluid Reasoning Index (Gf) | 82 | <input type="checkbox"/> Test Comp | Clear Score 1 |
| Fluid Reasoning (Gf) | 91 | <input type="checkbox"/> Comp | Clear Score 2 |
| | | <input type="checkbox"/> Comp | Clear Score 3 |

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

| | | | |
|--------------------------------|----|------------------------------------|---------------|
| WISC-V Block Design (GvBD) | 79 | <input type="checkbox"/> Test Comp | Clear Score 1 |
| WISC-V Matrix Reasoning (GvMR) | 78 | <input type="checkbox"/> Comp | Clear Score 2 |
| | | <input type="checkbox"/> Comp | Clear Score 3 |

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

| | | | |
|--|--|------------------------------------|---------------|
| | | <input type="checkbox"/> Test Comp | Clear Score 1 |
| | | <input type="checkbox"/> Comp | Clear Score 2 |
| | | <input type="checkbox"/> Comp | Clear Score 3 |

Ensuring validation of Gc score.

This Gc score is below the selected/default range typical for English learners. Ensure that it has been validated via native language testing or evaluation when using it in PSW analysis.

OK

SELECTING SCORES FOR PSW ANALYZER

X-BASS will automatically warn you when you enter and select a Gc score for an EL that is below the expected range to ensure that it was validated by native language evaluation.

Nondiscriminatory Interpretation of Test Scores: A Case Study

Determining if and when to re-evaluate all other (non-Gc) abilities

Because cultural knowledge and language ability are not the primary focus in measurement of other abilities, the influence of cultural/linguistic factors can be determined via the C-LIM and scores below the expected range of performance may well be deemed to be the result of factors other than cultural knowledge or language ability. Thus, there is no limitation requiring comparison of performance to a true ELL peer group as there is with Gc. Thus, use of a test's norms and the attendant standard classification scheme is appropriate for determining areas of suspected weakness using tests administered in English for abilities other than Gc.

However, to establish validity for a low score obtained from testing in English with an ELL, native language evaluation is required. The following guidelines from the best practice recommendations apply to all abilities, including Gc—when Gc has been determined to be a weakness because it falls below the expected range of difference in the C-LIM.*

- Review results from testing in English and identify domains of suspected weakness or difficulty:
 - For all abilities, **except Gc**, evaluate weakness using standard classifications (e.g., $SS < 90$)
- Re-test all domains of suspected weakness, **including Gc when it is not within the expected range of difference in the C-LIM*** using native language tests
- Administer native language tests or conduct re-testing using one of the following methods:
 - Native language test administered in the native language (e.g., WJ III/Bateria III or WISC-IV/WISC-IV Spanish)
 - Native language test administered via assistance of a trained interpreter
 - English language test translated and administered via assistance of a trained interpreter
- Administer tests in manner necessary to ensure full comprehension including use of any modifications and alterations necessary to reduce barriers to performance, while documenting approach to tasks, errors in responding, and behavior during testing, and analyze scores both **quantitatively and qualitatively** to confirm and validate areas as true weaknesses

***Or, if Gc was evaluated with the Ortiz PVAT, the actual score when compared to the English Learner norms (NOT the English Speaker norms) indicates that it is likely an area of weakness.**

SLD Identification with an English Learner: A Case Study

WISC-V/WJ IV/VIAT-III XBA DATA FOR Maria Ayala
DOE: 5/29/2017 DOB: 9/6/2007 Grade: 4

WECHSLER INTELLIGENCE SCALE FOR CHILDREN-V

| | | | | | |
|----------------------------|----|------------------------|----|-------------------------------|----|
| Verbal Comprehension Index | 76 | Fluid Reasoning Index | 82 | Visual-Spatial Index | 95 |
| Similarities | 5 | Matrix Reasoning | 7 | Block Design | 9 |
| Vocabulary | 6 | Figure Weights | 7 | Visual Puzzles | 9 |
| Working Memory Index | 79 | Processing Speed Index | 94 | WISC IV Spanish (Gf subtests) | 91 |
| Digit Span | 5 | Coding | 9 | Matrix Reasoning | 8 |
| Picture Span | 7 | Symbol Search | 8 | Picture Concepts | 9 |
| WISC IV Spanish WMI | 72 | | | | |
| Digit Span | 5 | | | | |
| Letter-Number Sequencing | 4 | | | | |

WOODCOCK JOHNSON-IV TESTS OF COGNITIVE ABILITY

| | | | | | |
|-------------------------|----|--------------------------|----|------------|----|
| Auditory Processing | 91 | LT Storage/Retrieval | 77 | Ortiz PVAT | 93 |
| Phonological Processing | 99 | Story Recall | 70 | | |
| Nonword Repetition | 84 | Visual-Auditory Learning | 75 | | |
| | | Bateria III LT Retrieval | 79 | | |
| | | Visual-Auditory Learning | 81 | | |
| | | Retrieval Fluency | 78 | | |

Results of native language testing for Gf, Gsm, and Glr

SLD Identification with an English Learner: A Case Study

The original WISC-V Gf-based score (FRI) was cohesive and suggested a deficit (SS=82). Because the corresponding domain (PRI) of the older WISC-IV Spanish was based on three subtests (Matrix Reasoning, Block Design, and Picture Concepts) and because Block Design is now a part of the new Visual Spatial Index of the WISC-V, it should not be re-tested or used again as a part of the Gf domain. It is, however, appropriate to use the two Gf subtests to form a composite via the XBA Analyzer shown below.

| FLUID REASONING (Gf) | Enter Scores | Converted Standard Score | Composite Score Analyses |
|---|--------------|--------------------------|--------------------------|
| WISC-IV SPANISH Matrix Reasoning (Gf:I) | 8 | 90 | A |
| WISC-IV SPANISH Picture Concepts (Gf:I) | 9 | 95 | A |
| COHESIVE: Use 2-subtest XBA composite | | SS: 91 | |
| Reset Score Configuration | | PR: 27 | |
| Evaluate Score Configuration | | | |
| Go to Gf Test List Classification | | | |
| Transfer Comp(s) to Data Organizer | | | |

Score configuration and interpretation:
The difference between the two scores is less than 1SD and, therefore, they form a composite that is considered cohesive and likely a good summary of the set of theoretically related abilities that comprise it. Interpret the composite as an adequate estimate of the ability that it is intended to measure.

The original score (WISC-V FRI=82) suggested a deficit. However, follow up native language testing resulted in a higher and cohesive XBA composite score (SS=91) indicating likely average ability. Thus, the original score is invalidated and should be replaced by the native language score for the purposes of analysis and interpretation.

Use the green button to transfer the native language XBA Gf composite to the Data Organizer

SLD Identification with an English Learner: A Case Study

LONG-TERM STORAGE AND RETRIEVAL (Glr)
(check these boxes to select score for integrated graph)

| | Enter scores | Converted Standard Score | Composite Score Analyses |
|--|--------------|--------------------------|--------------------------|
| Bateria III Woodcock-Munoz | 79 | 81 | A |
| Bateria III Aprendizaje Visual-Auditivo (Glr:MA) | 81 | 81 | A |
| Bateria III Fluides de Recuperacion (Glr:FI) | 78 | 78 | A |

2-subtest test composite: COHESIVE - Use test composite

Reset Score Configuration Evaluate Score Configuration
Go to Glr Test List Classifications Transfer Comp(s) to Data Organizer

Score configuration and interpretation:

The difference between the scores that comprise the test composite is less than 1SD and, therefore, is considered cohesive and is likely a good summary of the set of theoretically related abilities that comprise it. Interpret the test composite as an adequate estimate of the ability that it is intended to measure.

The original Gsm score from the WISC-IV (WMI) was cohesive and suggested a deficit (SS=78). Follow up native language testing provided a norm-based test composite for Gsm similar in value (SS=72) that also indicates a possible deficit. Thus, the original score is validated but additional converging evidence is necessary (e.g., work samples, observations, progress monitoring info, etc.).

The original Glr score on the WJ IV COG was cohesive and suggested a deficit (SS=77). Follow up native language testing resulted in a similar score (SS=79) that also indicated possible deficit. Thus, the original score is validated, but additional converging evidence is necessary (work samples, observations, progress monitoring info, etc.).

SHORT-TERM MEMORY (Gsm)
(check these boxes to select score for integrated graph)

| | Enter scores | Converted Standard Score | Composite Score Analyses |
|---|--------------|--------------------------|--------------------------|
| Wechsler Intelligence Scale for Children-IV SPANISH | 72 | 75 | A |
| WISC-IV SPANISH Digit Span (Gsm:MS,MW) | 5 | 75 | A |
| WISC-IV SPANISH Letter-Number Sequencing (Gsm:MW) | 4 | 70 | A |

2-subtest test composite: COHESIVE - Use test composite

Reset Score Configuration Evaluate Score Configuration
Go to Gsm Test List Classifications Transfer Comp(s) to Data Organizer

Score configuration and interpretation:

The difference between the scores that comprise the test composite is less than 1SD and, therefore, is considered cohesive and is likely a good summary of the set of theoretically related abilities that comprise it. Interpret the test composite as an adequate estimate of the ability that it is intended to measure.

In these two cases, the native language scores do not need to be transferred to the Data Organizer as they merely provide cross-linguistic confirmation of the original scores obtained in English which will be used instead.

SLD Identification with an English Learner: A Case Study

Data Organizer and Score Summary
Release: 2.3

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

WISC-V WISC-IV WPPSI-IV WIAT-III WI IV COG WI IV ACH WI IV GL KABC-II KTIIA-3 CAS2 DAS-II SB5

Guidelines for Selecting Best Composite Scores for SLD Evaluation

The purpose of this tab is to organize composites and subtests to assist in the selection of those to be used for evaluation of the pattern of strengths and weaknesses in the PSW Analyzer. XBA composites that were transferred from other tabs because they may select up to two composites for each of the CHC broad ability (e.g., for each of the academic areas. Note that you may also click on the test scores for use in PSW analyses, click the button to the right.

When a native language score invalidates a previous score obtained in English, it is necessary to transfer it to the Data Organizer for use in PSW analysis.

After you have made your selections, click the "S&W Indicator" button to continue with additional steps for conducting PSW analyses.

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

| | | | |
|---|----|-----------|---------------|
| WISC-V Verbal Comprehension Index (Gc:VI) | 76 | Test Comp | Clear Score 1 |
| Ortiz PIAT Score (EL norms) | 93 | Test Comp | Clear Score 2 |

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) | 77 | Test Comp | Clear Score 1 |
| Bateria III Woodcock-Munoz (Glr) | 79 | Test Comp | Clear Score 2 |

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.

| | | | |
|-------------------------------------|----|-----------|---------------|
| WISC-V Visual Spatial Index (Gv:Vz) | 95 | Test Comp | Clear Score 1 |
|-------------------------------------|----|-----------|---------------|

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.

| | | | |
|-----------------------------------|----|-----------|---------------|
| WISC-V Fluid Reasoning Index (Gf) | 82 | Test Comp | Clear Score 1 |
| Fluid Reasoning (Gf) | 91 | Comp | Clear Score 2 |

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.

| | | | |
|-----------------------------------|----|-----------|---------------|
| WISC-V Working Memory Index (Gsm) | 79 | Test Comp | Clear Score 1 |
| Short-Term Memory - XBA Gsm | 78 | Comp | 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.

| | | | |
|--------------------------|----|------|---------------|
| Auditory Processing (Ga) | 92 | Comp | Clear Score 1 |
|--------------------------|----|------|---------------|

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

| | | | |
|------------------------------------|----|-----------|---------------|
| WISC-V Processing Speed Index (Gs) | 94 | Test Comp | Clear Score 1 |
|------------------------------------|----|-----------|---------------|

Other native language scores may also be transferred but should NOT be used for PSW analysis unless they invalidate a previous score.

Nondiscriminatory Interpretation of Test Scores: A Case Study

Determining which scores are valid and interpretable

Average* or higher scores in testing are unlikely to be due to chance. Thus, when a score obtained from native language testing is found to be in the average range or higher, it serves to effectively invalidate the original low score from testing in English since deficits must exist in both languages. Conversely, if another low score in the same domain is obtained from native language evaluation, it may serve to bolster the validity of the original score obtained in English.

Based on these premises, the following guidelines from the best practice recommendations offer guidance regarding selection and use of the most appropriate and valid score for the purposes of PSW analysis (or any other situation in which the validity of test scores is central or relevant):

- For all domains, **including Gc**, if a score obtained in the native language suggests a domain is a strength ($SS \geq 90$), it serves to invalidate/disconfirm the corresponding weakness score obtained in English—thus, report, use, and interpret the domain score obtained in the native language
- For all domains, **except Gc**, if a score obtained in the native language also suggests weakness in the same domain ($SS < 90$), it serves to validate/confirm the corresponding weakness score obtained in English—thus, report, use, and interpret the original domain score obtained in English
- For **Gc only**, if a score obtained in the native language also suggests weakness in Gc ($SS < 90$), it may serve to validate/confirm the corresponding weakness score obtained in English but only if low performance in Gc cannot be attributed to factors related to a lack or interruption of native language instruction and education, low family SES, or other lack of opportunity to learn—thus, in the absence of such mitigating factors, report, use, and interpret the domain score obtained in English

*Although “average or higher” (e.g., $SS \geq 90$) is used as a recommended cutoff for supporting the validity of test scores, use of a lower standard (e.g., $SS \geq 85$) may also represent a reasonable standard for practice since it is based on performance that can be categorized as being within normal limits.

A Recommended Best Practice Approach for Using Tests with ELs

DETERMINING STRENGTHS AND WEAKNESSES IN MULTILINGUAL EVALUATION

| | Original score when tested in English | Follow up score when tested in native language | Most appropriate and valid score for use in PSW analysis | | Rationale for Use as Strength or Weakness in PSW Analysis |
|--|---------------------------------------|--|--|----------------------------------|---|
| | | | Original Score (in English) | Follow Up Score (in native lang) | |
| For ALL domains* | S | n/a | ✓ | | Strength —scores in or above the average range (or even WNL) are unlikely to occur by chance and very likely to be valid thus re-evaluation in the native language is unnecessary |
| For ALL domains (and when Gc is below expected range in C-LIM) | W | S | | ✓ | Strength —because a deficit cannot exist in one language only, the original score from testing in English is invalidated and should be replaced by the follow up average score which is likely to be valid |
| For ALL domains (and when Gc is below expected range in C-LIM) | W | W | ✓ | | Weakness —low scores in both languages suggest a true deficit but additional, convergent and consistent ecological evidence is required to substantiate scores as deficits |
| For Gc Only (and when Gc is within the expected range in C-LIM) | S | n/a | ✓ | | Strength —Gc can only be compared fairly to other ELLs, thus its position within the expected range in the C-LIM should be considered to be average and native language testing may not be necessary unless there is reason to believe it may be informative |

*Although this table uses “average or higher” (e.g., $SS \geq 90$) as a recommended cutoff for supporting the validity of test scores, use of a lower standard (e.g., $SS \geq 85$) may also represent a reasonable standard for practice since it is based on performance that can be categorized as being within normal limits.

SLD Identification with an English Learner: A Case Study

- 1: Enter all available subtest scores in C-LIM Analyzer to determine validity
- 2: When likely/possibly valid, transfer data and enter remaining composite scores
- 3: Use XBA to conduct follow up testing where indicated and as necessary
- 4: Enter follow up tests and re-evaluate pattern with C-LIM Summary
- 5: If still likely/possibly valid, evaluate follow up testing results via XBA Analyzer
- 6: Transfer cohesive composites (and academic subtests) to Data Organizer
- 7: Identify deficits for native language re-evaluation and compare to original scores
- 8: Select best scores for PSW Analysis and designate each as strength or weakness
- 9: Evaluate scores and results from PSW-A Data Summary and PSW Analyzer
- 10: Use additional data and information to support interpretations and conclusions

Procedures
for Step 2

SLD Identification with an English Learner: A Case Study

Determining which scores are valid and interpretable

Derivation of an Ortiz PVAT score using the English learner norms eliminates the Gc problem completely. The Ortiz PVAT score simply replaces any Gc/language-related/verbal ability score because it was derived precisely on EL "true peers" and therefore inherently valid in terms of both meaning/classification and actual magnitude (e.g., 90 - 109 = average).

| | English | Spanish | Valid? | Interpretation? |
|-------------------|---------|---------|----------|-----------------|
| - Gc | 76 | - | 76 - No | - |
| - Gf | (82) | 91 | 91 - Yes | S |
| - Glr | 77 | (79) | 77 - Yes | W |
| - Gsm | 78 | (72) | 78 - Yes | W |
| - Gv | 98 | - | Yes | S |
| - Ga | 92 | - | Yes | S |
| - Gs | 94 | - | Yes | S |
| - Gc (Ortiz PVAT) | 93 | - | Yes | S |

Additional native language investigation of areas of weakness noted in scores derived from testing in English (with the exception of the score from the Ortiz PVAT), resulted in an average Gf score that invalidated the original Gf score, and two below average scores that simply cross-linguistically confirmed Glr and Gsm as areas of weakness as indicated by the test scores in English.

SLD Identification with an English Learner: A Case Study

Data Organizer and Score Summary
Release: 2.3

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

WISC-V WAB-IV WPPSI-IV WIAT-III WI IV COG WI IV ACH WI IV OL RABC-II RTEA-3 CAS2 DAS-II SDS

Guidelines for Selecting Best Composite Scores for SLD Evaluation

The purpose of this tab is to organize composites and subtests to assist in the selection of those to be used for evaluation of the pattern of strengths and weaknesses in the PSW Analyzer. Test names and scores can not be entered into this tab directly. Rather, this tab provides a summary of test battery and XBA composites that were transferred from other tabs because they were considered the best estimates of CHC abilities, academic areas, and selected neuropsychological domains. Use this tab to select the composites and subtest scores you would like to use in PSW analyses by clicking on the check box to the right of each one in any domain for which there are data. You may select up to two composites for each of the CHC broad ability (e.g., Gc, Gf, Gsm) and neuropsychological (e.g., Executive Functions, Orthographic Processing) domains and up to three scores for each of the academic areas. Note that you may also click on the "Data Organizer Graph" to view or print the information on this tab. For more information on how to select the best scores for use in PSW analyses, click the button to the right.

After you have made your selections, click the "S&W Indicator" button to continue with additional steps for conducting PSW analyses.

CRYSTALLIZED INTELLIGENCE (Gc)
Indicate which composite(s) you wish to use for PSW analyses. No more than two scores can be selected for this domain.
WISC-V Reading Index (Gc-VI) 76 ☐ Test Comp
WISC-V PIAT Score (EL norm) 93 ☒ Test Comp
WISC-V PIAT Score (EL norm) ☐

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.
WISC-V Fluid Reasoning Index (Gf) 82 ☐ Test Comp
WISC-V Fluid Reasoning (Gf) 91 ☒ Comp
WISC-V Fluid Reasoning (Gf) ☐

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.
WISC-V Long-Term Storage and Retrieval (Glr) 77 ☒ Test Comp
WISC-V Long-Term Storage and Retrieval (Glr) ☐
WISC-V 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.
WISC-V Working Memory Index (Gsm) 79 ☐ Test Comp
Short-Term Memory - XBA Gsm 78 ☒ Comp
Short-Term Memory - XBA Gsm ☐

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.
WISC-V Visual Spatial Index (Gv-Vz) 95 ☒ Test Comp
WISC-V Visual Spatial Index (Gv-Vz) ☐
WISC-V Visual Spatial Index (Gv-Vz) ☐

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.
Auditory Processing (Ga) 92 ☒ Comp
Auditory Processing (Ga) ☐
Auditory Processing (Ga) ☐

PROCESSING SPEED (Gs)
Indicate which composite(s) you wish to use for PSW analyses. No more than two scores can be selected for this domain.
WISC-V Processing Speed Index (Gs) 94 ☒ Test Comp
WISC-V Processing Speed Index (Gs) ☐
WISC-V Processing Speed Index (Gs) ☐

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

For Gf, the native language score is selected for use since it invalidated the English language score.

For Gsm, we can choose either a two-subtest norm-based composite or a three-subtest XBA composite. Since three subtest composites are more reliable, it was selected here.

SLD Identification with an English Learner: A Case Study

Data Organizer and Score Summary
Release: 2.3

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

WISC-V WAB-IV WPPSI-IV WIAT-III WI IV COG WI IV ACH WI IV OL RABC-II RTEA-3 CAS2 DAS-II SDS

Guidelines for Selecting Best Composite Scores for SLD Evaluation

The purpose of this tab is to organize composites and subtests to assist in the selection of those to be used for evaluation of the pattern of strengths and weaknesses in the PSW Analyzer. Test names and scores can not be entered into this tab directly. Rather, this tab provides a summary of test battery and XBA composites that were transferred from other tabs because they were considered the best estimates of CHC abilities, academic areas, and selected neuropsychological domains. Use this tab to select the composites and subtest scores you would like to use in PSW analyses by clicking on the check box to the right of each one in any domain for which there are data. You may select up to two composites for each of the CHC broad ability (e.g., Gc, Gf, Gsm) and neuropsychological (e.g., Executive Functions, Orthographic Processing) domains and up to three scores for each of the academic areas. Note that you may also click on the "Data Organizer Graph" to view or print the information on this tab. For more information on how to select the best scores for use in PSW analyses, click the button to the right.

After you have made your selections, click the "S&W Indicator" button to continue with additional steps for conducting PSW analyses.

BASIC READING SKILLS (BRS)
Indicate which composite or subtests you wish to use for PSW analyses. All three scores may be selected for this domain.
WIAT-III Basic Reading Skills (BRS) 94 ☒ Test Comp
WIAT-III Basic Reading Skills (BRS) ☐
WIAT-III Basic Reading Skills (BRS) ☐

READING COMPREHENSION (RC)
Indicate which composite or subtests you wish to use for PSW analyses. All three scores may be selected for this domain.
WIAT-III Reading Comprehension (RC; Gv-W-R-RC) 76 ☒ Subtest
WIAT-III Reading Comprehension (RC; Gv-W-R-RC) ☐
WIAT-III Reading Comprehension (RC; Gv-W-R-RC) ☐

READING FLUENCY (RF)
Indicate which composite or subtests you wish to use for PSW analyses. All three scores may be selected for this domain.
WIAT-III Oral Reading Fluency (RF; Gv-W-R-F) 80 ☒ Subtest
WIAT-III Oral Reading Fluency (RF; Gv-W-R-F) ☐
WIAT-III Oral Reading Fluency (RF; Gv-W-R-F) ☐

WRITTEN EXPRESSION (WE)
Indicate which composite or subtests you wish to use for PSW analyses. All three scores may be selected for this domain.
WIAT-III Written Expression (WE) 92 ☒ Test Comp
WIAT-III Written Expression (WE) ☐
WIAT-III Written Expression (WE) ☐

MATH CALCULATION (MC)
Indicate which composite or subtests you wish to use for PSW analyses. All three scores may be selected for this domain.
☐
☐
☐

MATH PROBLEM SOLVING (MP)
Indicate which composite or subtests you wish to use for PSW analyses. All three scores may be selected for this domain.
☐
☐
☐

LISTENING COMPREHENSION (LC)
Indicate which composite or subtests you wish to use for PSW analyses. All three scores may be selected for this domain.
☐
☐
☐

Use of individual achievement subtests rather than composites helps provide clarity and specificity regarding relationship between cognitive and academic weaknesses when conducting PSW Analysis.

Selected scores appear in yellow and a maximum of 3 academic scores can be selected including any combination of test composites, XBA composites, or subtest scores.

SLD Identification with an English Learner: A Case Study

Strengths and Weaknesses Indicator
Release: 2.3

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

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.

After you have made your selections, click the "PSW-A Data Summary" button to continue with the PSW analysis.

CRYSTALLIZED INTELLIGENCE (Gc)

Ortiz PIAT Score (EL norms) Test Comp 93 ☐ strength ☐ weakness

LONG-TERM STORAGE AND RETRIEVAL (Glr)

WU IV COG Long-Term Retrieval (Glr) Test Comp 77 ☐ strength ☐ weakness

VISUAL PROCESSING (Gv)

WISC-V Visual Spatial Index (Gv-Vz) Test Comp 95 ☐ strength ☐ weakness

PROCESSING SPEED (Gs)

WISC-V Processing Speed Index (Gs) Test Comp 94 ☐ strength ☐ weakness

BASIC READING SKILLS (BRS)

WAT-II Basic Reading Skills (BRS) Test Comp 94 ☐ strength ☐ weakness

READING FLUENCY (RDF)

WAT-II Oral Reading Fluency (RF (Grw-RRS) Subtest 80 ☐ strength ☐ weakness

FLUID REASONING (Gf)

Fluid Reasoning (Gf) Comp 91 ☐ strength ☐ weakness

SHORT-TERM MEMORY (Gsm)

Short-Term Memory - XBA Gam Comp 78 ☐ strength ☐ weakness

AUDITORY PROCESSING (Ga)

Auditory Processing (Ga) Comp 92 ☐ strength ☐ weakness

OTHER PROCESSING AREA

READING COMPREHENSION (RDC)

WAT-II Reading Comprehension (RC,Grw-RRC) Subtest 76 ☐ strength ☐ weakness

WRITTEN EXPRESSION (WE)

WAT-II Written Expression (WE) Test Comp 92 ☐ strength ☐ weakness

Strengths and weaknesses MUST be designated by the user. X-BASS does NOT make this determination as the meaning of any given score requires more information than just its magnitude.

SLD Identification with an English Learner: A Case Study

Strengths and Weaknesses Indicator
Release: 2.3

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

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.

After you have made your selections, click the "PSW-A Data Summary" button to continue with the PSW analysis.

CRYSTALLIZED INTELLIGENCE (Gc)

WISC-V Verbal Comprehension Index (Gc-VL) Test Comp 76 ☐ strength ☒ weakness

LONG-TERM STORAGE AND RETRIEVAL (Glr)

WU IV COG Long-Term Retrieval (Glr) Test Comp 77 ☐ strength ☐ weakness

VISUAL PROCESSING (Gv)

WISC-V Visual Spatial Index (Gv-Vz) Test Comp 95 ☐ strength ☐ weakness

PROCESSING SPEED (Gs)

WISC-V Processing Speed Index (Gs) Test Comp 94 ☐ strength ☐ weakness

BASIC READING SKILLS (BRS)

WAT-II Basic Reading Skills (BRS) Test Comp 94 ☐ strength ☐ weakness

READING FLUENCY (RDF)

WAT-II Oral Reading Fluency (RF (Grw-RRS) Subtest 80 ☐ strength ☐ weakness

FLUID REASONING (Gf)

Fluid Reasoning (Gf) Comp 91 ☐ strength ☐ weakness

SHORT-TERM MEMORY (Gsm)

Short-Term Memory - XBA Gam Comp 78 ☐ strength ☐ weakness

AUDITORY PROCESSING (Ga)

Auditory Processing (Ga) Comp 92 ☐ strength ☐ weakness

OTHER PROCESSING AREA

READING COMPREHENSION (RDC)

WAT-II Reading Comprehension (RC,Grw-RRC) Subtest 76 ☐ strength ☐ weakness

WRITTEN EXPRESSION (WE)

WAT-II Written Expression (WE) Test Comp 92 ☐ strength ☐ weakness

Caution: Gc is in expected range

This Gc score is within the selected/default range typical for English learners and should be considered a strength for the purposes of PSW analysis. Are you sure you want to mark this score as a weakness?

Yes No

X-BASS will automatically warn you when a Gc score is indicated as a "weakness" when it falls within the expected range that corresponds to the degree of difference in the C-LIM (or default value—moderate, if not changed).

SLD Identification with an English Learner: A Case Study

Strengths and Weaknesses Indicator
Release: 2.3

Name: Mario Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

Determination of Strengths and Weaknesses

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 90 or higher are considered strengths and scores that fall below 90 are considered weaknesses.

After you have made your selections, click the "PSW-A Data Summary" button to continue with the PSW analysis.

| CRYSTALLIZED INTELLIGENCE (Gc) | | FLUID REASONING (Gf) | |
|---|--|---|--|
| WISC-V Verbal Comprehension Index (Gc-VI) Test Comp | 76 <input checked="" type="radio"/> strength <input checked="" type="radio"/> weakness | Fluid Reasoning (Gf) Comp | 91 <input checked="" type="radio"/> strength <input checked="" type="radio"/> weakness |
| | <input type="radio"/> strength <input type="radio"/> weakness | | <input type="radio"/> strength <input type="radio"/> weakness |
| LONG-TERM STORAGE AND RETRIEVAL (Glr) | | SHORT-TERM MEMORY (Gsm) | |
| WJ IV COG Long-Term Retrieval (Glr) Test Comp | 77 <input checked="" type="radio"/> strength <input checked="" type="radio"/> weakness | WISC-V Working Memory Index (Gsm) Test Comp | 79 <input checked="" type="radio"/> strength <input checked="" type="radio"/> weakness |
| | <input type="radio"/> strength <input type="radio"/> weakness | | <input type="radio"/> strength <input type="radio"/> weakness |
| VISUAL PROCESSING (Gv) | | AUDITORY PROCESSING (Ga) | |
| WISC-V Visual Spatial Index (Gv-VI) Test Comp | 95 <input checked="" type="radio"/> strength <input checked="" type="radio"/> weakness | Auditory Processing (Ga) Comp | 92 <input checked="" type="radio"/> strength <input checked="" type="radio"/> weakness |
| | <input type="radio"/> strength <input type="radio"/> weakness | | <input type="radio"/> strength <input type="radio"/> weakness |
| PROCESSING SPEED (Gp) | | OTHER PROCESSING AREA | |
| WISC-V Symbol Search Index (Gp-VI) Test Comp | 80 <input checked="" type="radio"/> strength <input checked="" type="radio"/> weakness | WAT-III Written Expression (WE) Test Comp | 92 <input checked="" type="radio"/> strength <input checked="" type="radio"/> weakness |
| | <input type="radio"/> strength <input type="radio"/> weakness | | <input type="radio"/> strength <input type="radio"/> weakness |

Use of the original English language Gc score is likely to be discriminatory since the magnitude (value) is considered "well below average" in normative comparison. Since it was within the shaded range on the C-LIM, its actual meaning when compared fairly to other ELLs indicates average or better functioning. Therefore, it should be marked here as a "strength" not "weakness." Failure to do so will significantly reduce the fairness of finding SLD in ELLs.

SLD Identification with an English Learner: A Case Study

PSW-A Data Summary

Release: 2.3

Name: *Maria Ayala - Case Study* Grade: *4* Date: *5/29/2017* Age: *9 years 8 month(s)*

WISC-V WAIS-IV WPPSI-IV WIAT-III WI-VI COG WI-IV ACH WI-IV OL KABC-II KITA-3 CAN2 DAS-II SBS

CHC ABILITY DOMAINS

SCORE **75** **W** **Gc-V**

WISC-V Verbal Comprehension Index (Gc-VI) Test Comp

0.38

1. g Value:
The g value reflects overall cognitive ability based on the individual's overall general cognitive ability. The g value is interpreted according to the individual possesses at least average ability.

Cognitive Composite (ICC)
The individual's overall general cognitive ability (g) and is used to evaluate the individual's performance relative to a specific pattern of academic weaknesses.

Cognitive Composite (ACC)
An alternative value if the individual is when the individual is the best estimate of the individual's overall cognitive ability.

OK

91

Gv **S** **WISC-V**

94

Gs **S** **WISC-V Processing Speed Index (Gs) Test Comp**

72

ICC will be used for PSW analysis

User Mode
Beginner
Intermediate
Advanced

Next Step **Age: 9 years 8 month(s)**

Display Results Again

Score difference will be considered rare/frequent 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/frequent when it occurs 10% of the time (default value, best for standard analysis with composites and reliable tests)

Score difference will be considered rare/frequent when it occurs 15% of the time (very liberal value, increases false positive rate not recommended)

1. 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 no cognitive weakness, ICC is not calculated.

2. Utility/Frequency of Difference - FCC/ACC to Cognitive Weakness
This value is used for determining if the size of a difference occurs rarely or infrequently. The cutoff value is 0.5. A more conservative or liberal value may be selected. If other composites are used, a strict value may be appropriate.

Because Gc is the most important ability related to academic success and accounts for the majority of variance in overall general ability, failure to properly evaluate it against other ELLs with comparable backgrounds may result in highly attenuated g-Values that suggest low ability and mask possible SLD. In this case, the Gc score was within the expected range and should be indicated as a "strength" not "weakness."

SLD Identification with an English Learner: A Case Study

Strengths and Weaknesses Indicator
Release: 2.3

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

WISC-V WAI-IV WPPSI-IV WIAT-III WI IV COS WI IV ACH WI IV OL KABC-R KTEA-3 CAS2 DAS-9 SBS

Determination of Strengths and Weaknesses
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.

After you have made your selections, click the "PSW-A Data Summary" button to continue with the PSW analysis.

CRYSTALLIZED INTELLIGENCE (Gc)
WISC-V Verbal Comprehension Index (Gc/VI) Test Comp **76** ☒ strength ☐ weakness

LONG-TERM STORAGE AND RETRIEVAL (Glr)
WI IV COG Long-Term Retrieval (Glr) Test Comp **77** ☐ strength ☒ weakness

VISUAL PROCESSING (Gv)
WISC-V Visual Spatial Index (Gv/VI) Test Comp **95** ☒ strength ☐ weakness

PROCESSING SPEED (Gs)
WISC-V Processing Speed Index (Gs) Test Comp **94** ☒ strength ☐ weakness

FLUID REASONING (Gf)
Fluid Reasoning (Gf) Comp **91** ☒ strength ☐ weakness

SHORT-TERM MEMORY (Gsm)
WISC-V Working Memory Index (Gsm) Test Comp **79** ☐ strength ☒ weakness

AUDITORY PROCESSING (Ga)
Auditory Processing (Ga) Comp **92** ☒ strength ☐ weakness

OTHER PROCESSING AREA
☐ strength ☐ weakness

COMPREHENSION (RDC)
☐ strength ☐ weakness

WRITTEN EXPRESSION (WE)
WIAT-III Written Expression (WE) Test Comp **92** ☒ strength ☐ weakness

WRITING EXPRESSION (WE)
☐ strength ☐ weakness

Use of obtained SS for Gc combined with assignment of nondiscriminatory meaning using the C-LIM, provides less biased and fair interpretation of ability in area of Gc because X-BASS automatically handles the Gc score in ways that prevent biased and discriminatory calculations.

SLD Identification with an English Learner: A Case Study

PSW-A Data Summary
Release: 2.3

Name: Maria Ayala - Case Study Grade: 4 Date: 5/29/2017 Age: 9 years 8 month(s)

WISC-V WAI-IV WPPSI-IV WIAT-III WI IV COS WI IV ACH WI IV OL KABC-R KTEA-3 CAS2 DAS-9 SBS

CHC ABILITY DOMAINS

| Area of strength below from the Facilitating Cognitive Composite (FCC) | CHC ABILITY DOMAINS | SCORE | Area of weakness below from the Inhibiting Cognitive Composite (ICC) |
|--|---|-------|--|
| Gc S | WISC-V Verbal Comprehension Index (Gc/VI) Test Comp | 76 | |
| Gf S | Fluid Reasoning (Gf) Comp | 91 | |
| | WI IV COG Long-Term Retrieval (Glr) Test Comp | 77 | W Glr |
| | WISC-V Working Memory Index (Gsm) Test Comp | 79 | W |
| Gv S | WISC-V Visual Spatial Index (Gv/VI) Test Comp | 95 | |
| Ga S | Auditory Processing (Ga) Comp | 92 | |
| Gs S | WISC-V Processing Speed Index (Gs) Test Comp | 94 | |

CHC Composites designated as strengths are used for computation of the g-value and FCC (top oval in the FCC model) and those designated as weaknesses are used for computation of the ICC (bottom left oval in the FCC 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 distribution that an individual possesses at least average overall cognitive ability.

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 particular cognitive and academic weaknesses.

2b. Inhibiting Cognitive Composite (ICC):
Represents an aggregate of an individual's overall weaknesses and is used to evaluate consistency in the relationship between cognitive and academic weaknesses. If there is only one cognitive weakness, the ICC is not calculated.

3. Ratio/Frequency of Difference - FCC/ACC to Cognitive Weakness:
Select base rate level for determining if the use 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 5% base rate may be appropriate.

4. Ratio/Frequency of Difference - FCC/ACC to Cognitive Weakness:
Select base rate level for determining if the use 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 5% base rate may be appropriate.

Summary:
g-Value: 0.64
FCC: 91
ICC: 75

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

To prevent discriminatory attenuation in the case of ELs, if the Gc score is designated as a strength, and it is SS < 90 but within or above the expected range in the C-LIM, X-BASS will automatically exclude it from the calculations for the FCC. Use of the Ortiz PVAT eliminates the need for this corrective action.

SLD Identification with an English Learner: A Case Study

Strengths and Weaknesses Indicator
Release: 2.3

Name: Maria Ayala - Case Study Age: 9 years 8 month(s) Grade: 4 Date: 5/29/2017

WISC-V WAIS-IV WPPSI-IV WIAT-III WI IV COG WI IV ACH WI IV GL KABC-II KTEA-3 CAS2 DAS-II SB5

Determination of Strengths and Weaknesses
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.

After you have made your selections, click the "PSW-A Data Summary" button to continue with the PSW analysis.

Selecting Scores for PSW Analyzer

| Domain | Score | Strength | Weakness |
|--|-------|----------------------------------|----------------------------------|
| CRYSTALLIZED INTELLIGENCE (Gc) | | | |
| Ortiz PVAT Score (EL norms) Test Comp | 93 | <input checked="" type="radio"/> | <input type="radio"/> |
| LONG-TERM STORAGE AND RETRIEVAL (Glr) | | | |
| WI IV COG Long-Term Retrieval (Glr) Test Comp | 77 | <input type="radio"/> | <input checked="" type="radio"/> |
| VISUAL PROCESSING (Gv) | | | |
| WISC-V Visual Spatial Index (Gv-V2) Test Comp | 95 | <input checked="" type="radio"/> | <input type="radio"/> |
| PROCESSING SPEED (Gs) | | | |
| WISC-V Processing Speed Index (Gs) Test Comp | | <input type="radio"/> | <input checked="" type="radio"/> |
| FLUID REASONING (Gf) | | | |
| Fluid Reasoning (Gf) Comp | 91 | <input checked="" type="radio"/> | <input type="radio"/> |
| SHORT-TERM MEMORY (Gsm) | | | |
| Short-Term Memory - XBA Gsm Comp | 78 | <input type="radio"/> | <input checked="" type="radio"/> |
| AUDITORY PROCESSING (Ga) | | | |
| Auditory Processing (Ga) Comp | 92 | <input checked="" type="radio"/> | <input type="radio"/> |
| OTHER PROCESSING AREA | | | |
| | | <input type="radio"/> | <input checked="" type="radio"/> |
| READING FLUENCY (RF) | | | |
| WAT-III Oral Reading Fluency (RF, Grw-RRS) Subtest | 80 | <input type="radio"/> | <input checked="" type="radio"/> |
| WRITTEN EXPRESSION (WE) | | | |
| WAT-III Written Expression (WE) Test Comp | 92 | <input checked="" type="radio"/> | <input type="radio"/> |
| COMPREHENSION (RC) | | | |
| W-RRC Subtest | 76 | <input type="radio"/> | <input checked="" type="radio"/> |

An easier solution, of course, is to use the Ortiz PVAT score instead of the WISC-V VCI (or completely in lieu of the VCI) to eliminate the possibility of designating scores incorrectly as strengths or weaknesses.

Multilingual Assessment of ELs: Step by Step

Step 1. Test first in English (L2) and evaluate construct validity in all areas in English (exclusion of cultural/linguistic factors)

- If all scores indicate normative strengths ($SS \approx 90$ or higher) when tested in English (L2), scores are valid to the extent that a disability is not likely, thus no further testing is necessary.
- If some scores are normative weaknesses ($SS < \approx 90$) evaluate test score validity in a research-based manner, e.g., via the C-LIM.
- If C-LIM indicates primary influence of language/culture, test scores are likely invalid and indicate average ability in all areas and a disability is not likely, thus no further testing is necessary.
- If C-LIM indicates contributory or minimal influence of language/culture, test scores are likely to be valid and the evaluation should continue.

Step 2. Re-evaluate areas of weakness in native language (L2) to provide additional supporting evidence of validity (cross-linguistic confirmation)

- If data indicate an area is a strength (i.e., average), then original L2 score is invalid, use the L1 score.
- If data indicate an area is still a weakness, then original L2 score is valid, use the L2 score.

Step 3. Further cross-validate L1 and L2 test scores with contextual factors and pre-referral data and academic concerns (ecological validity for disability)

- Use all other case data and information to serve as the context by which to evaluate the test scores and ensure ecological validity to conclusions

SLD Identification with an English Learner: A Case Study

- 1: Enter all available subtest scores in C-LIM Analyzer to determine validity
- 2: When likely/possibly valid, transfer data and enter remaining composite scores
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- 4: Enter follow up tests and re-evaluate pattern with C-LIM Summary
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Procedures
for Step 3

SLD Identification with an English Learner: A Case Study

PSW-A Data Summary
Release: 2.3

Name: Maria Ayala - Case Study Grade: 4 Date: 5/29/2017 Age: 9 years 8 month(s)

WISC-V WAB-IV WPPSI-IV WIAT-III WI-IV CDS WI-IV ACH WI-IV OL KABC-S KTEA-3 CAS2 DAS-II SB5

Area of strength below from the Facilitating Cognitive Composite (FCC)

Area of weakness below from the Inhibiting Cognitive Composite (ICC)

CHC ABILITY DOMAINS SCORE

Criterion for average ability is likely met.

PSW analysis indicates that the individual is an English learner and appears to possess at least average overall ability. In this case, the g-Value is > .50 and the FCC/ACC is > .84. Consequently, the individual may be identified as SLD if the results from PSW analysis indicate that all other criteria for SLD identification have also been met and if supported by other data sources and information. Note that although Gc is below average, it has been correctly indicated as a strength and contributes to the g-Value due to its consistency with average performance of individuals from similar cultural/linguistic backgrounds. However, because inclusion of Gc in determining the FCC would attenuate overall ability unfairly, it is excluded from that calculation.

g-Value: 0.64

FCC Composite (FCC) overall general ability is used to evaluate strength of patterns of weaknesses.

ACC Composite (ACC) a value if desired or when the best estimate of

ICC Composite (ICC) an individual's overall evaluate consistency and cognitive and academic one cognitive weakness.

Score difference will be considered rare/frequent when

Score difference will be considered rare/frequent when

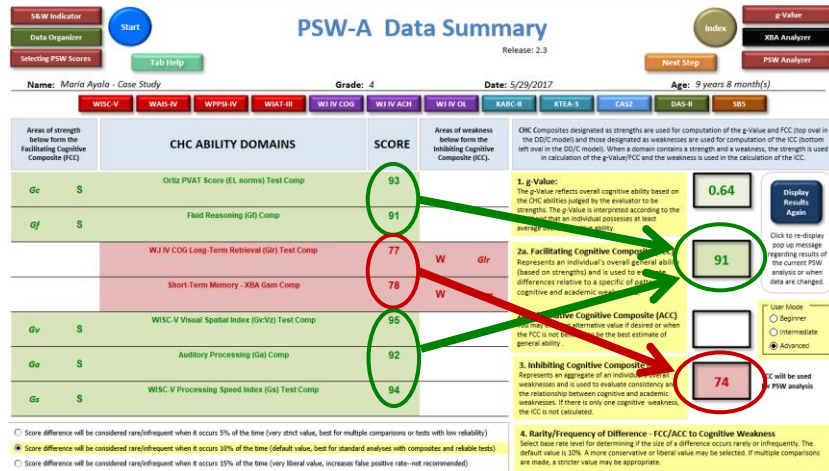
Score difference will be considered rare/frequent when it occurs 15% of the time (very liberal value; scores false positive rates are recommended)

Difference - FCC/ACC to Cognitive Weaknesses

When the use of a difference occurs rarely or infrequently, the default value is .30%. A more conservative or liberal value may be selected. If multiple comparisons are made, a stricter value may be appropriate.

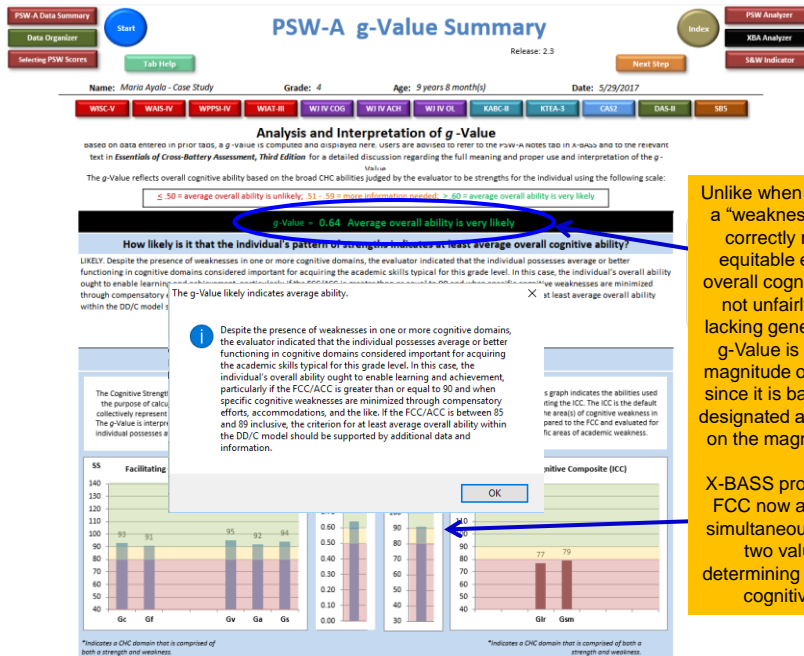
When a Gc (and any other CHC ability domain score), whether a broad or narrow composite, is marked as a "strength," it is included in calculations for determining the g-Value. Likewise, any score marked as a "weakness" are not used in deriving the g-Value. This keeps the g-Value free from the influence of the magnitude of the scores and thus complements the FCC which is based directly on the magnitude of the "strength" scores.

SLD Identification with an English Learner: A Case Study



When a Gc (and any other CHC ability domain score), whether a broad or narrow composite, is marked as a "strength," (typically $SS \geq 90$), X-BASS will always include its value in calculation of the FCC. Likewise, any scores marked as "weakness" are always factored into calculation of the ICC.

SLD Identification with an English Learner: A Case Study



Unlike when Gc was indicated as a "weakness," the g-Value now correctly reflects a true and equitable estimate of Maria's overall cognitive ability and does not unfairly represent her as lacking general intelligence. The g-Value is not affected by the magnitude of the standard score since it is based only on abilities designated as "strengths" and not on the magnitude of the scores.

X-BASS provides a graph of the FCC now as well which allows simultaneous comparison of the two values as a part of determining an otherwise normal cognitive ability profile.

SLD Identification with an English Learner: A Case Study

**Dual-Discrepancy/Consistency Model:
PSW Analyses for SLD** Release 2.3

Name: **Maria Ayala - Case Study** Age: **9 years 8 month(s)** Grade: **4** Date: **5/29/2017**

g-value: **0.64**

PSW Supports SLD: **YES**

Based on the data selected for use in the PSW Analyzer, specific criteria for establishing a PSW consistent with SLD have been met. However, this pattern of results does not automatically confirm the presence of SLD. This pattern must be considered within the context of the entire case history of the individual. In addition, other data gathered through multiple methods need to be considered (e.g., information regarding exclusionary factors) when identifying or diagnosing SLD (see chapter 4 in Essentials of Cross-Battery Assessment, 3rd Ed.).

Are weaknesses domain-specific? Using the FCC as the predictor, if the difference between Actual and Predicted performance equals or exceeds the size of the difference, the difference is infrequent and the weakness is domain-specific.

Difference: **18.21** Yes, domain-specific

Cognitive Weakness: If calculated, the Inhibiting Cognitive Composite (ICC) is selected below by default. Different areas of cognitive weakness from one group.

Inhibiting Cognitive Composite (ICC) - 75

Actual: **75** Predicted: **93**

ICC Strengths (FCC)

Both Weaknesses? **YES**

Relationship of Weaknesses? **MOD**

Is there a BELOW AVERAGE aptitude-achievement consistency? **YES, CONSISTENT**

Weakness: The list is selected by clicking a different area of weakness from the drop-down menu.

WAT-III Reading Comprehension (RDC) One-RBC Subtest - 76

Actual: **76** Predicted: **94**

RDC Strengths (FCC)

Performance unexpected? As the predictor, if the difference between Actual and Predicted performance equals or exceeds the Critical Value, then the difference is unusually large and underachievement is unexpected.

Critical Value: **12.28**

Underachievement: **predicted underachievement**

Rate value set at 10%

Using the ICC, data are consistent overall with SLD. But because the ICC is a trans-domain composite with greater reliability than a domain specific composite, it is more likely to reveal a significant difference. In addition, the ICC does not provide specific information regarding the nature of the cognitive deficit or inform intervention and instruction. As such, it may be beneficial to also explore SLD via specific areas of cognitive weakness that may be related to the areas of academic weakness.

SLD Identification with an English Learner: A Case Study

**Dual-Discrepancy/Consistency Model:
PSW Analyses for SLD** Release 2.3

Name: **Maria Ayala - Case Study** Age: **9 years 8 month(s)** Grade: **4** Date: **5/29/2017**

g-value: **0.64**

PSW Supports SLD: **YES**

Based on the data selected for use in the PSW Analyzer, specific criteria for establishing a PSW consistent with SLD have been met. However, this pattern of results does not automatically confirm the presence of SLD. This pattern must be considered within the context of the entire case history of the individual. In addition, other data gathered through multiple methods need to be considered (e.g., information regarding exclusionary factors) when identifying or diagnosing SLD (see chapter 4 in Essentials of Cross-Battery Assessment, 3rd Ed.).

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Inhibiting Cognitive Composite (ICC) - 75

Actual: **75** Predicted: **93**

ICC Strengths (FCC)

Both Weaknesses? **YES**

Relationship of Weaknesses? **MOD**

Is there a BELOW AVERAGE aptitude-achievement consistency? **YES, CONSISTENT**

Weakness: The list is selected by clicking a different area of weakness from the drop-down menu.

WAT-III Reading Comprehension (RDC) One-RBC Subtest - 76

Actual: **76** Predicted: **94**

RDC Strengths (FCC)

Performance unexpected? As the predictor, if the difference between Actual and Predicted performance equals or exceeds the Critical Value, then the difference is unusually large and underachievement is unexpected.

Critical Value: **12.28**

Underachievement: **predicted underachievement**

Rate value set at 10%

Changing the cognitive weakness to **Gr** also reveals a PSW consistent with SLD. It also provides a better indication that the academic problems are likely the result of deficits in **Gr**.

SLD Identification with an English Learner: A Case Study

**Dual-Discrepancy/Consistency Model:
PSW Analyses for SLD** Release: 2.3

Name: *Maria Ayala - Case Study* Age: *9 years 8 month(s)* Grade: *4* Date: *5/29/2017*

g-value: *0.64*

PSW Supports SLD: YES

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 the weakness is domain specific.

Difference: *16.34*
Yes, domain specific
Base rate value set at 10%

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.

WISC-IV Cog Long-Term Retrieval (GLT) Test Comp - 77
WISC-IV Cog Long-Term Retrieval (GLT) Test Comp - 77
WISC-IV Cog Long-Term Retrieval (GLT) Test Comp - 77

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

WAT-II Reading Comprehension (RDC) One-RBC Subtest - 76
WAT-II Reading Comprehension (RDC) One-RBC Subtest - 76
WAT-II Reading Comprehension (RDC) One-RBC Subtest - 76

Both Weaknesses? **YES** Strength of Relationship **MOD**

BELOW AVERAGE aptitude-achievement consistency?
YES, CONSISTENT

ment unexpected?
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 the weakness is unexpected.

Critical Value: *12.28*
Unexpected underachievement
Base rate value set at 10%

Weakness
Weakness in the list is selected by clicking on the drop-down menu.

OK

Based on the data selected for use in the PSW Analyzer, specific criteria for establishing a PSW consistent with SLD have been met. However, this pattern of results does not automatically confirm the presence of SLD. This pattern must be considered within the context of the entire case history of the individual. In addition, other data gathered through multiple methods need to be considered (e.g., information regarding exclusionary factors) when identifying or diagnosing SLD (see chapter 4 in Essentials of Cross-Battery Assessment, 3rd Ed.).

In this case, changing the cognitive weakness to Gsm also results in a PSW consistent with SLD and provides additional information regarding the likely cause of the academic problems as having a basis, at least in part, to deficits in Gsm.

SLD Identification with an English Learner: A Case Study

**Dual-Discrepancy/Consistency Model:
PSW Analyses for SLD** Release: 2.3

Name: *Maria Ayala - Case Study* Age: *9 years 8 month(s)* Grade: *4* Date: *5/29/2017*

g-value: *0.64*

PSW Supports SLD: NO

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 the weakness is domain specific.

Difference: *18.21*
Yes, domain specific
Base rate value set at 10%

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.

Inhibiting Cognitive Composite (ICC) - 74
Inhibiting Cognitive Composite (ICC) - 74
Inhibiting Cognitive Composite (ICC) - 74

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

WAT-II Reading Comprehension (RDC) One-RBC Subtest - 76
WAT-II Reading Comprehension (RDC) One-RBC Subtest - 76
WAT-II Reading Comprehension (RDC) One-RBC Subtest - 76

Both Weaknesses? **YES** Strength of Relationship **MOD**

BELOW AVERAGE aptitude-achievement consistency?
YES, CONSISTENT

Unexpected underachievement?
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 the weakness is unexpected.

Critical Value: *12.28*
Unexpected underachievement
Base rate value set at 10%

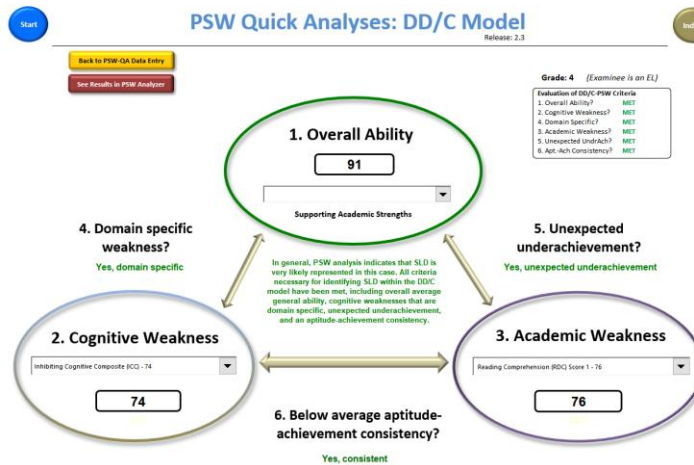
Academic Weakness
Weakness in the list is selected by clicking on the drop-down menu.

OK

Based on the data selected for use in the PSW Analyzer, at least one criterion considered necessary for establishing a PSW consistent with SLD has not been met. However, this pattern of results does not automatically rule out the presence of SLD. These results must be considered within the context of the entire case history of the individual. In addition, other data gathered through multiple methods need to be considered (e.g., history of prior interventions, use of compensatory strategies, type of accommodations received) when identifying or diagnosing SLD (see chapter 4 in Essentials of Cross-Battery Assessment, 3rd Ed.).

When compared against short-term memory, reading fluency shows a poor relationship to reading fluency and further argues against SLD in this area. consistent with SLD because of unexpected underachievement.

SLD Identification with an English Learner: A Case Study



Transferring the scores into the PSW-QA provides a much simplified view of the results and is far more suitable for explaining results to others and including in typical psychoeducational reports.

SLD Identification with an English Learner: A Case Study

- 1: Enter all available subtest scores in C-LIM Analyzer to determine validity
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- 5: If still likely/possibly valid, evaluate follow up testing results via XBA Analyzer
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Procedures
for Step 3

SLD Identification with an English Learner: A Case Study

The Importance of Converging Evidence in Establishing Validity

Validity is based on an accumulation of evidence. The evaluation approach described herein is designed to assist in generating test scores that may be interpreted as valid indicators of an individual's abilities. Embedded in the broader framework are two basic forms of evidence that bolster the validity of obtained test scores by using expectations of test performance that are grounded in research on individuals of comparable cultural and linguistic backgrounds and the extent to which their development differs from the individuals on whom the tests were normed. Validity is thus inferred by:

1. *Test scores from evaluation in English that have been subjected to systematic analysis of the influence of cultural and linguistic variables where such factors have been found to be either minimal or contributory but not primary factors in test performance;*
2. *Test scores or qualitative data regarding evaluation of weak areas in the native language that either further confirm suspected areas of deficit as being true or dis-confirm suspected areas of deficit due to evidence of average or higher performance.*

To these two forms of evidence, a third should be added to fully support conclusions and interpretation of the obtained test scores:

3. *Ecological and contextual evidence regarding consistency of the test scores with ecological data and information on developmental influences (e.g., L1 and L2 exposure, language of instruction, socio-economic status, parental education level, etc.) and convergence of patterns of performance with other case data (e.g., progress monitoring data, pre-referral concerns, work samples, observations, school records, teacher/parent reports, grades, interviews, observations, etc.).*

Only when all three forms of evidence are seen to converge can there be sufficient confidence in the use and interpretation of test scores obtained in an evaluation of English learners.

SLD Identification with an English Learner: A Case Study

Sample Validity Statement for ELL Evaluations

Statement 2. Evaluations of Suspected Learning Disability - Valid Results

The following sample validity statement may be used in cases where a clear declining pattern is NOT evident, that is, there is no primary effect of culture and language thus the results ARE valid and there may be a disability.

Because the student is not a native English speaker, it is necessary to establish the validity of the results obtained from testing to ensure that they are accurate estimates of ability or knowledge and not the manifestation of cultural or linguistic differences. To this end, a systematic evaluation of the possible effects of a relative lack of opportunity for the acquisition of acculturative knowledge and English proficiency was carried out via use of the Culture-Language Interpretive Matrix (C-LIM).

A careful review of the student's test data, as entered into the C-LIM, revealed either no overall pattern of decline or a partial pattern of decline combined with performance in one or more area that was below the range that would be expected of other individuals with similar cultural and linguistic backgrounds. This pattern of test performance suggests that cultural and linguistic factors were either *minimal* (no evident decline) or *contributory* (some decline) influences on the measured test performance but can not account for the entirety of the results. Accordingly, the test results were not considered to be due primarily to the influence of cultural and linguistic factors but still required additional information to fully establish their validity. Evidence to further support the validity of the obtained results was provided by converging sources of information including results from native language evaluation, progress-monitoring data, qualitative analysis, and authentic assessment methods. In addition, other extraneous factors that might account for the observed pattern (for example, lack of motivation, fatigue, incorrect administration/scoring, emotional/behavioral problems) were also evaluated and excluded. Taken together, the reported test results were deemed likely to be valid, interpretable, and to be reliable estimates of the student's actual ability or knowledge. However, equitable interpretation of Gc (cultural knowledge and language development), required comparison relative to other English learners with comparable linguistic development and educational experiences which was accomplished via examination of the magnitude of the high culture/high language cell in the C-LIM and whether it was within the selected range of difference. Consequently, the academic difficulties observed in classroom performance and which prompted this evaluation are not likely to attributable primarily to the process of normal second language and acculturative knowledge acquisition.

In summary, the observed pattern of the student's test results is not consistent with performance that is typical of non-disabled, culturally and linguistically diverse individuals who are of average ability or higher. Therefore, it can be reasonably concluded that the test data evaluated with the C-LIM are likely to be valid, are supported by additional converging data, and suggest that that the student's test performance can be used to support the presence of a learning disability or other cognitive-based disorder.

The statement above is the one most appropriate for this case where a) the evaluation focused on suspected SLD; and b) where it was determined that the obtained test results were NOT influenced primarily by cultural and linguistic factors, albeit they remained contributory. Thus, the test results (except for Gc) could be considered valid estimates of the abilities that were measured. In addition, native language testing was conducted to further support cognitive test score validity. This statement (and three others contained in X-BASS) have been placed in the public domain and may be freely copied, modified, and distributed for non-profit purposes without the need to secure permission.

SLD Identification with an English Learner: A Case Study

Sample Validity Statement for EL Evaluations

Simplified Validity Statement for **LIKELY** SLD and Determination of **VALID** Results

Because XXXX is not a native English speaker, it is necessary to establish the validity of test scores to ensure that they are true estimates of their ability and not the result of limited English proficiency.

XXXX's test data were entered into the Culture-Language Interpretive Matrix which permitted evaluation of the extent to which the scores were primarily affected by cultural or linguistic factors. A review of the pattern of test scores indicated that performance was not consistent with what would be expected of other individuals with similar cultural and linguistic backgrounds. This means that the scores may be interpreted as fair estimates of XXXX's abilities, with the exception of language which can only be determined to be an area of strength or weakness via comparison to other English learners which was accomplished by further use of the C-LIM.

The statement above is most appropriate for this case where a) the evaluation focused on suspected SLD; and b) where it was determined that the obtained **test results were not influenced primarily by cultural and linguistic factors**, albeit these factors may have remained contributory. Thus, the test results (except for Gc) could be considered valid estimates of the abilities that were measured. Native language testing should also have been conducted to further support cognitive test score validity. This statement has been placed in the public domain and may be freely copied, modified, and distributed for non-profit purposes without the need to secure permission.

SLD Identification with an English Learner: A Case Study

Sample Validity Statement for EL Evaluations

Simplified Validity Statement for **UNLIKELY** SLD and Determination of **INVALID** Results

Because XXXX is not a native English speaker, it is necessary to establish the validity of test scores to ensure that they are true estimates of their ability and not the result of limited English proficiency.

XXXX's test data were entered into the Culture-Language Interpretive Matrix which permitted evaluation of the extent to which the scores were primarily affected by cultural or linguistic factors. A review of the pattern of test scores indicated that performance was consistent with what would be expected of other individuals with similar cultural and linguistic backgrounds. This means that the scores cannot be interpreted as fair estimates of XXXX's abilities.

However, because the scores were compared to other individuals from research studies who were of average ability and who had not been identified as having a disability, it suggests that XXXX's performance is also average (possibly higher) and that it is not likely that a learning disability is present in this case. This means that although XXXX is having difficulties in the classroom, the problems are most likely attributable to, and primarily the result of, the normal process of second language and acculturative knowledge acquisition.

Assessment and Related Resources

TESTS:

Ortiz Picture Vocabulary Acquisition Test (Ortiz PVAT)

<https://www.mhs.com/ortizpvat>

Ortiz PVAT Free 30-Day Trial and 2 Free Uses

<http://info.mhs.com/OrtizPVATfreetrial>

BOOKS:

Ortiz, S. O., Flanagan, D. P. & Alfonso, V. C. (2015). Cross-Battery Assessment Software System (X-BASS v2.X). New York: Wiley & Sons, Inc.

Ortiz, S. O., Flanagan, D. P. & Alfonso, V. C. (Winter 2019--coming soon). Intervention Library: Finding interventions, resources and supports for students with learning difficulties (IL:FIRST v1.0). New York: Wiley & Sons, Inc.

Flanagan, D. P., Ortiz, S.O. & Alfonso, V.C. (2013). Essentials of Cross-Battery Assessment, Third Edition. New York: Wiley & Sons, Inc.

ONLINE:

Competency-based XBA Certification Program

<https://www.schoolneuropsych.com/xba/>

CHC Cross-Battery Online

<http://www.crossbattery.com/>

Free C-LIM Resources

<http://facpub.stjohns.edu/~ortizs/CLIM/index.html>

