A Brief Introduction and Tutorial for Application and Interpretation of the C-LIM

TRANSLATION OF RESEARCH INTO PRACTICE

Samuel O. Ortiz, Ph.D.
St. John's university

Research Foundations of the C-LIM

Language development and subtest level performance

"although a student's conversational level of English language proficiency could be perceived to be relatively consistent with their peers', their level of academic language proficiency may not be sufficient to fully benefit from classroom instruction or ***understand test directions to the same extent of a native English language speaker***" (p. 10)

"Some practitioners may have concerns regarding the additional testing time required to administer, score, and interpret performance on language ability tests. Flanagan, Ortiz, and Alfonso (2013) addressed this concern well, as they explained: Irrespective of whether test scores ultimately prove to have utility or not, ***practitioners must endeavor to ascertain the extent to which the validity of any obtained test scores may have been compromised prior to and before any interpretation is offered or any meaning assigned to them***. (p. 309)...Therefore, not only would this process be consistent with the aforementioned standards, but it would also lead to recommendations that are better informed and tailored to individual examinee characteristics." (p. 10)

Source: Cormier, D. C., Bulut, O., McGrew, K. S. & Kennedy, K. (2022). Linguistic Influences on Cognitive Test Performance: Examinee Characteristics Are More Important than Test Characteristics, Journal of Intelligence, Volume 10, Issue 1.

Research Foundations of the C-LIM

Language development and subtest level performance

"*the influence of language ability, **particularly receptive language ability,** is more influential than age on cognitive test performance*. This last point highlights the importance of considering language abilities when assessing students' cognitive abilities." (p. 9)

"One such challenge is assessing the cognitive abilities of the growing number of students who are considered ELs; ***limited English proficiency can lead to linguistically biased test results, which would lead to a misrepresentation of the examinee's true cognitive abilities. To eliminate this potential source of bias, psychologists testing EL students could consider examinee characteristics before administering a standardized measure of cognitive ability***. This idea is not new. More than a decade ago, Flanagan et al. (2007) noted the critical need for psychologists to collect information regarding students' level of English proficiency, and the level of English required for the student to be able to comprehend test directions, formulate and communicate responses, or otherwise use their English language abilities within the testing process. Nonetheless, the results of our study provide an empirical basis in support of this broad recommendation." (p. 9)

Research Foundations of the C-LIM

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 <u>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</u>.

With two exceptions, 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 and its derivative approaches (i.e., D-SNAP, C-LIM+ATE).

The Culture-Language Interpretive Matrix (C-LIM)

A Systematic Framework for Organizing and Guiding Evidence-Based Practice
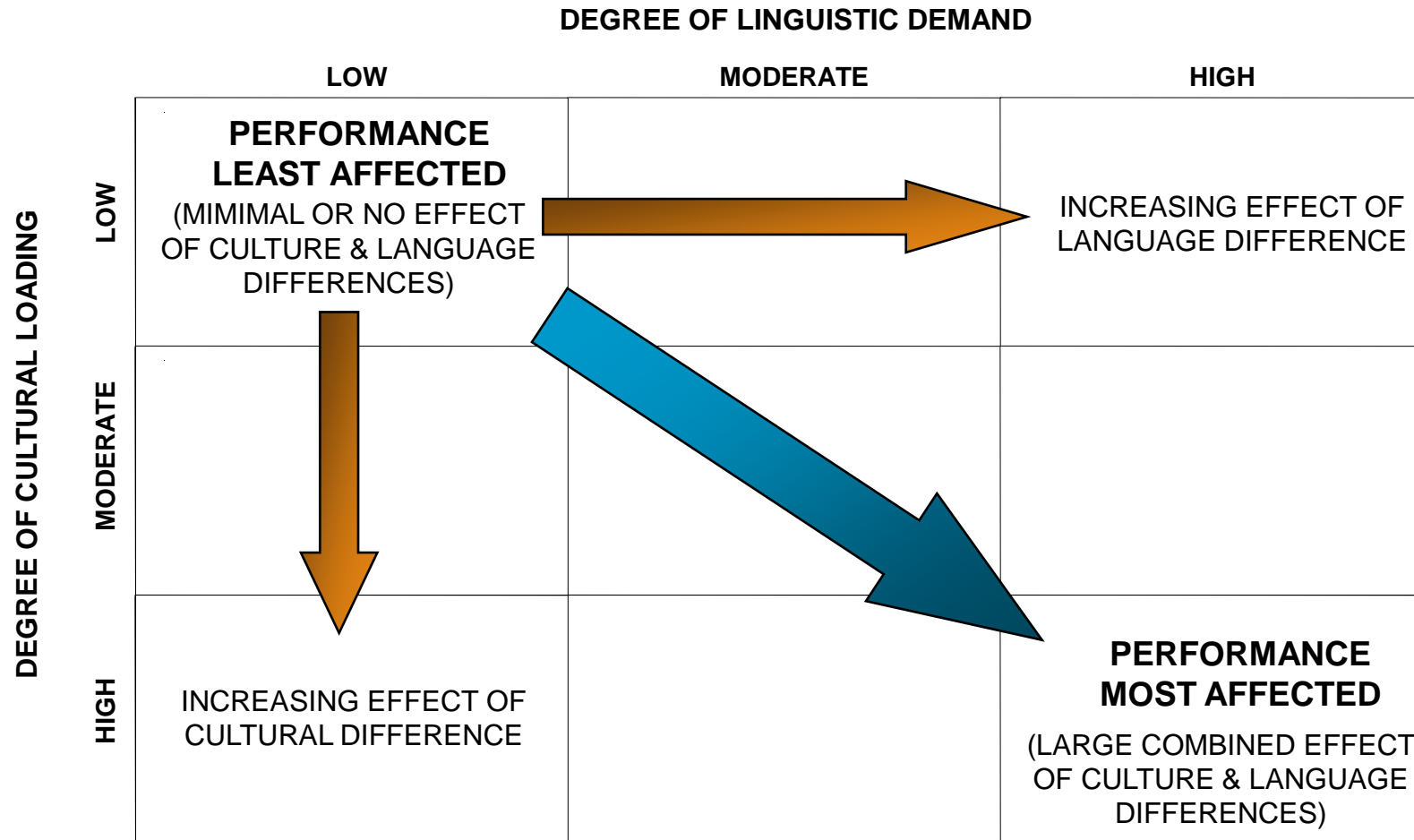
An example of translation of research into practice for evaluating test score validity

1. Research on test performance of ELs establishes the foundations upon which the C-LIM is based and its only purpose is to assist in determining 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)**.

2. Organizaton of the C-LIM as a matrix and graph, are simply visual organizers of this research and serve as a de facto "EL norm sample" for the purposes of examining ***cognitive, linguistic, and neuropsychological*** test results relative to exclusionary factors (i.e., cultural and linguistic differences). Achievement tests require a vastly different evidentiary base.

3. Because it relies on empirical studies that used standardized, English-language administration, norms, and scoring with non-disabled EL populations, the C-LIM can only be used if tests are also administered in English and without any form of modification to the administration or scoring protocols.

4. Although some native-language tests (e.g., WISC Spanish, Bateria) are included in the C-LIM, examination of those results should be accomplished independent of results from tests administered in English. Moreover, there is some, but likely insufficient research to promote the use of the C-LIM as being valid for ELs who are given native-language tests and such use should be viewed as exploratory and informational only.

   Free versions of C-LIM, C-LIM+ATE, D-STPGE, and other materials available at: http://facpub.stjohns.edu/~ortizs/CLIM/

Structure of the Classifications of Subtests Within the C-LIM

Matrix arrangement of expected subtest level performance for ELs vs. ES

DEGREE OF LINGUISTIC DEMAND

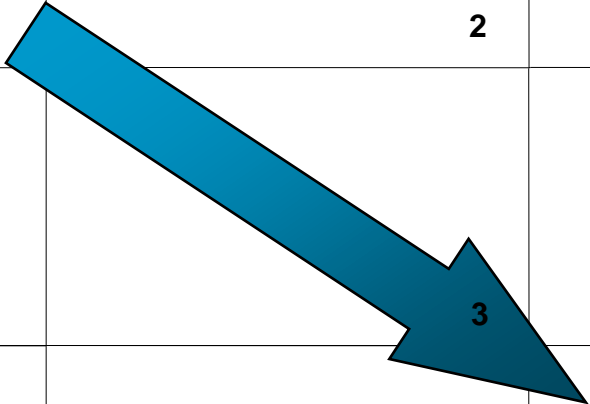|	LOW	MODERATE	HIGH
LOW	**PERFORMANCE LEAST AFFECTED** (MIMIMAL OR NO EFFECT OF CULTURE & LANGUAGE DIFFERENCES)		INCREASING EFFECT OF LANGUAGE DIFFERENCE
MODERATE			
HIGH	INCREASING EFFECT OF CULTURAL DIFFERENCE		**PERFORMANCE MOST AFFECTED** (LARGE COMBINED EFFECT OF CULTURE & LANGUAGE DIFFERENCES)

DEGREE OF CULTURAL LOADING

Structure of the Classifications of Subtests Within the C-LIM

BASIC PATTERN OF EXPECTED PERFORMANCE FOR ENGLISH LANGUAGE LEARNERS

DEGREE OF LINGUISTIC DEMAND

DEGREE OF CULTURAL LOADING

	LOW	MODERATE	HIGH
LOW	**HIGHEST MEAN SUBTEST SCORES** (CLOSEST TO MEAN) — 1	2	3
MODERATE	2	3	4
HIGH	3	4	**LOWEST MEAN SUBTEST SCORES** (FARTHEST FROM MEAN) — 5

General Steps for Application and Interpretation of the C-LIM

1. Determine "degree of difference" using the Diverse-Student True Peer Group Estimator (D-STPGE). The D-STPGE is integrated into the free version of the C-LIM (v6.0) and may also be downloaded as a separate tool via the link provided below. The D-STPGE can be used as a semi-structured interview if so desired.

2. Enter the subtest scores from all cognitive, linguistic, and neuropsychological tests that may have been administered to the individual. Academic skills tests cannot be entered into the C-LIM and there is no classification for them. To evaluate the impact of culture and language on achievement tests, use the C-LIM plus Achievement Test Extension (C-LIM+ATE v2.0) which is also available freely for download from the link provided below. Note that subtests on achievement tests that have a primary "cognitive" classification are classified in the C-LIM (e.g., KTEA-3 Associational Fluency; WIAT-4 Phonemic Proficiency).

3. Scroll down to the main graph and ensure that the correct "degree of difference" has been selected. Next, evaluate the three necessary and required criteria to determine score validity (i.e., 1) declining pattern; 2) within expected range; and 3) no score variability within cells). If all three conditions are met, the scores are likely invalid and cannot be interpreted and no further evaluation is necessary. If any ONE of the conditions is NOT met, the scores should be considered likely valid and follow up evaluation using the Multilingual (L2+L1) Approach is recommended.

4. Go to the "Statements" tab and copy the appropriate interpretive statement based on your findings. There are four available: 1) Invalid scores for SLD; 2) Valid scores for SLD; 3) Valid scores for SLI; and 4) Valid scores for ID. There are both simplified statements and more detailed technical statements for each that can be freely copied and pasted into any report.

Free C-LIM information, materials, and other resources are available at: http://facpub.stjohns.edu/~ortizs/CLIM/

General Steps for Application and Interpretation of the C-LIM: Step 1

The Diverse Student True Peer Group Estimator is a worksheet intended to provide a systematic method for collecting data and information that may be used to qualitatively estimate the extent to which differences in developmental experiences are likely to affect expectations of development and growth. Note that a student's degree of difference is dynamic and may change over time. Three categories are used:

A) Slightly Different. This category is characterized by differences in culture, language, and experiences that although not fully representative of the U.S. mainstream, have nevertheless been supported by high family SES, well-educated parents, formal elementary education in the heritage language, bilingual parents, etc.) and where opportunity for developing English language proficiency constitutes at least ½ or more of a student's life.

B) Moderately Different. This category is characterized by differences in culture, language, and experiences that are not representative of the U.S. mainstream and where few supporting factors are present (e.g., low family SES, parental lack of education, no formal education in the heritage language, parents with limited English proficiency, etc.) or where opportunity for developing English proficiency constitutes less than ½ of a student's life.

C) Markedly Different. This category is characterized by differences in culture, language, and experiences that includes at least one additional factor that is atypical, and which creates an adverse influence on development (e.g., poverty/homelessness, exposure to war, trauma, violence, abuse, neglect, immigrant or migrant worker experience, refugee status, chronic illness, etc.) or where opportunity for developing English proficiency constitutes less than 10% of a student's life.

Available for free at: http://facpub.stjohns.edu/~ortizs/CLIM/

General Steps for Application and Interpretation of the C-LIM: Step 1

Diverse Student True Peer Group Estimator (D-STPGE)

Using the rating scale below, *to what extent has or does the student('s)...?* 1 ------------------ 2 ------------------ 3 ------------------ 4 ------------------ 5 Lots Some Little	RATING
1. heritage or home culture match middle-class, mainstream U.S. values, traditions, and beliefs in supporting acquisition of school-based acculturative knowledge?	
2. socio-economic status match middle-class, mainstream families in the U.S. in supporting development of school-based learning and academic skills?	
3. heritage or home language match middle-class, mainstream, monolingual English-speakers in supporting the acquisition of school-based English?	
4. been able to participate in and attend school consistently and sufficiently to provide an adequate opportunity for academic learning?	
5. avoided any unusual or atypical developmental life experiences (e.g., frequent moves, immigration or migrant worker experience, refugee status, exposure to war, trauma, violence, neglect, abuse, etc.)?	
6. been provided formal education in their heritage language while attending school in the U.S. or prior to coming to the U.S.?	
7. been learning English over their lifetime as compared to middle-class, monolingual English-speakers of the same age?	
8. current English language development (including, reading/writing, vocabulary, and aspects of speech) compare to middle-class, monolingual, English-speakers of the same age?	
9. reside in a community where English is the dominant language and where cultural values and attitudes primarily reflect middle-class, mainstream U.S. values?	
10. been provided support for general and specific aspects of social/emotional development (e.g., mental health, self-identity, gender identification, sexual orientation, self-esteem, etc.)?	
TOTAL:	

Clear Ratings

TRUE PEER GROUP CLASSIFICATION GUIDELINES:
10 - 20 = SLIGHTLY DIFFERENT
21 - 39 = MODERATELY DIFFERENT
40 - 50 = MARKEDLY DIFFERENT

Print

— ZOOM +

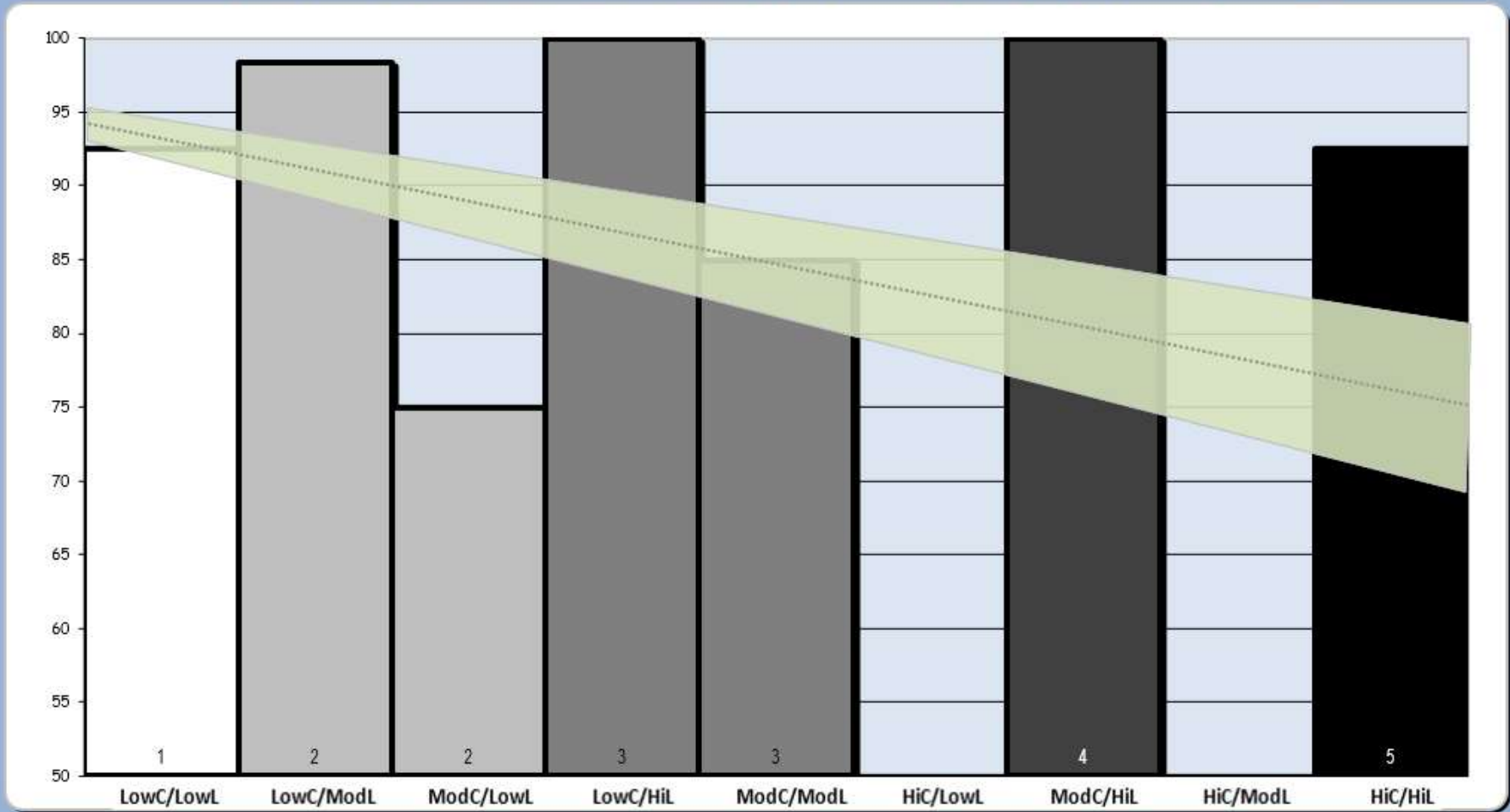# General Steps for Application and Interpretation of the C-LIM: Step 2

Culture-Language Interpretive Matrix - Analyzer and Data Entry

Name: **Benjamin – WISC-V**   Age: **10 years 8 month(s)**   Grade: **5**   Date: **1/1/2015**

DEGREE OF LINGUISTIC DEMAND

	LOW	Score		MODERATE	Score		HIGH	Score
LOW	WISC-V Cancellation	9 / 95	WISC-V Block Design	10 / 100	WISC-V Digit Span		
	WISC-V Matrix Reasoning	8 / 90	WISC-V Coding	9 / 95	WISC-V Letter-Number Sequencing	10 / 100
	WISC-V Naming Speed Quantity		WISC-V Delayed Symbol Translation			
	WISC-V Visual Puzzles		WISC-V Immediate Symbol Translation			
			WISC-V Picture Span			
			WISC-V Recognition Symbol Translation			
			WISC-V Symbol Search	10 / 100		
	Cell Average =	**93**	Cell Average =	**98**	Cell Average =	**100**
MODERATE	WISC-V Picture Concepts	5 / 75	WISC-V Arithmetic	7 / 85	WISC-V Comprehension	10 / 100
			WISC-V Figure Weights			
			WISC-V Naming Speed Literacy			
	Cell Average =	**75**	Cell Average =	**85**	Cell Average =	**100**
HIGH					WISC-V Information	
					WISC-V Similarities	9 / 95
					WISC-V Vocabulary	8 / 90
	Cell Average =		Cell Average =		Cell Average =	**93**

(Left axis label: DEGREE OF CULTURAL LOADING)

General Steps for Application and Interpretation of the C-LIM: Step 3

Guidelines for Addressing Exclusionary Factors via Examination of Test Score Validity

There are three basic criteria that, when all 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. Overall Pattern of Decline: *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. Within Expected Range: *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.*

3. No Significant Score Variability: *There is no variability in the scores that form the aggregate in any one cell or any variability between or among cells in the same level where high score performance may be masking the presence of low performance. Variability is defined as one score below average AND below the expected range, and the next lowest score is 1SD (15 points) higher and within the expected range.*

Results are **LIKELY INVALID** only if **ALL** conditions are **MET.**

Results are **LIKELY VALID** when **ANY** condition is **NOT MET.**

Interpretation: When **ALL** three criteria are **MET,** it may be concluded that the test scores are **LIKELY INVALID** because they were influenced primarily by cultural/linguistic variables and cannot be interpreted. When any **ONE** criterion is **NOT MET,** the results can be assumed to be **LIKELY VALID** and may be interpreted if further evidence is generated to support conclusions.

General Steps for Application and Interpretation of the C-LIM: Step 3
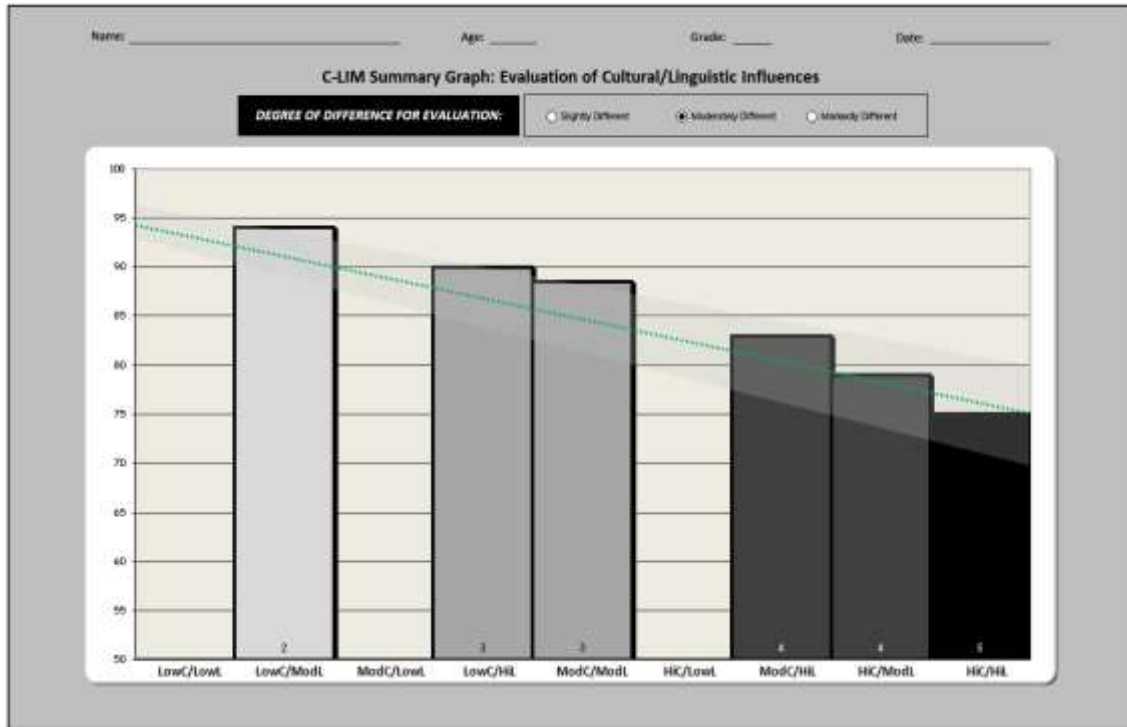
Example of "likely invalid" score pattern—overall general decline **AND** scores within or above expected ("average" or typical) range **AND** scores show no important variability.

Interpretation: Performance PRIMARILY due to linguistic and cultural factors, scores CANNOT be interpreted specifically, and provide no evidence to support disability.
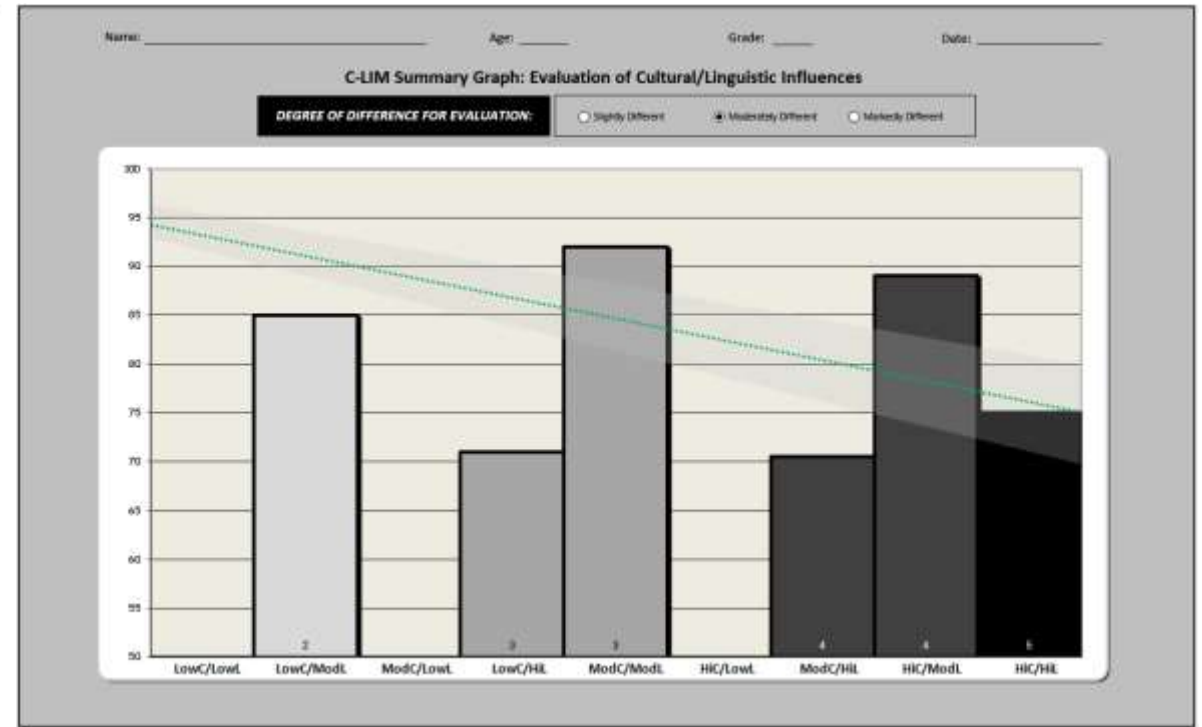
Example of "likely valid" score pattern—no overall decline **OR** scores below expected ("average" or typical) range **OR** scores show important variability.

Interpretation: Performance NOT PRIMARILY due to linguistic and cultural factors, scores CAN be interpreted but need further validation to provide evidence of possible disability.

General Steps for Application and Interpretation of the C-LIM: Step 3

General pattern of decline <u>AND</u> all scores within or above the expected range for ELs.
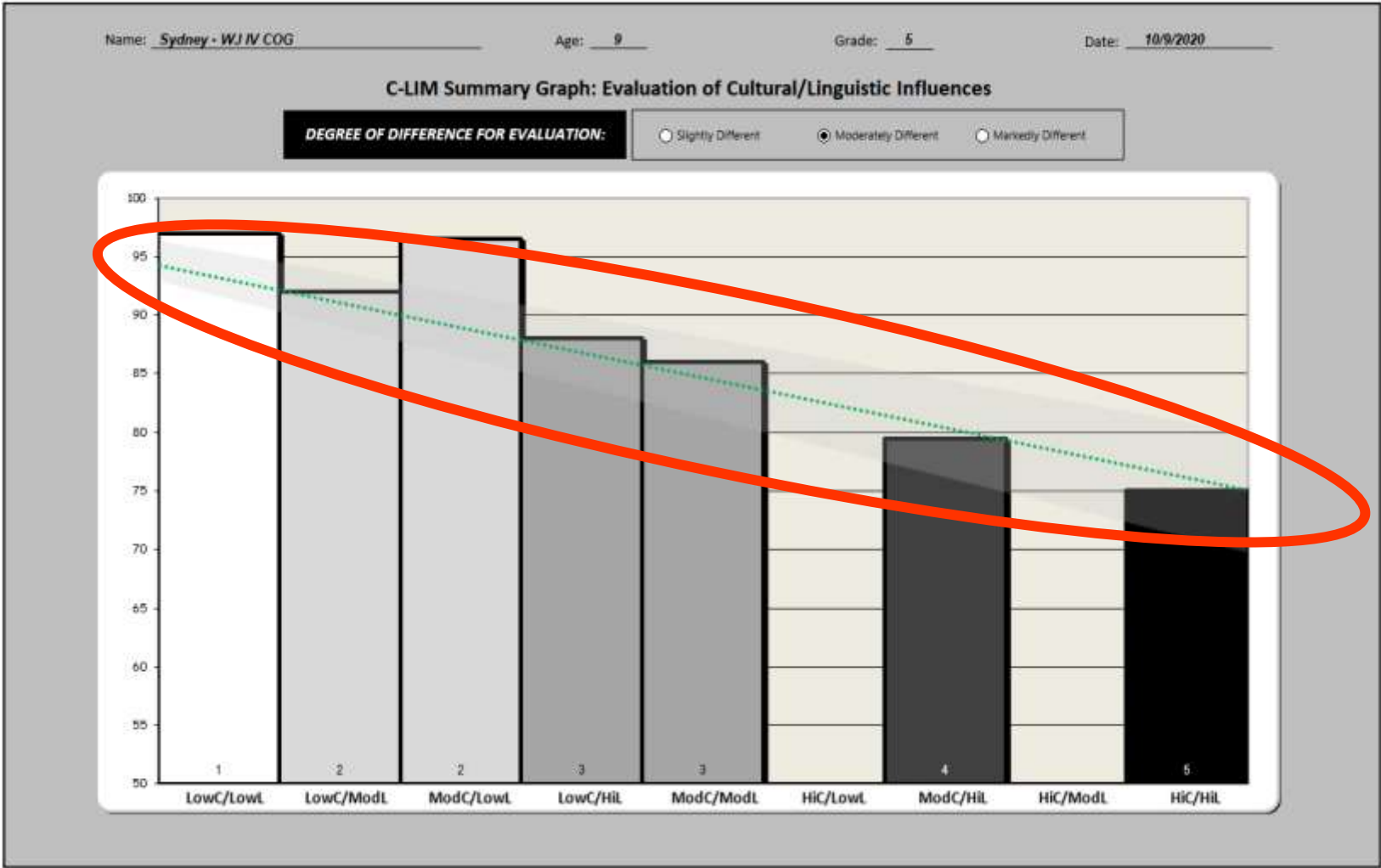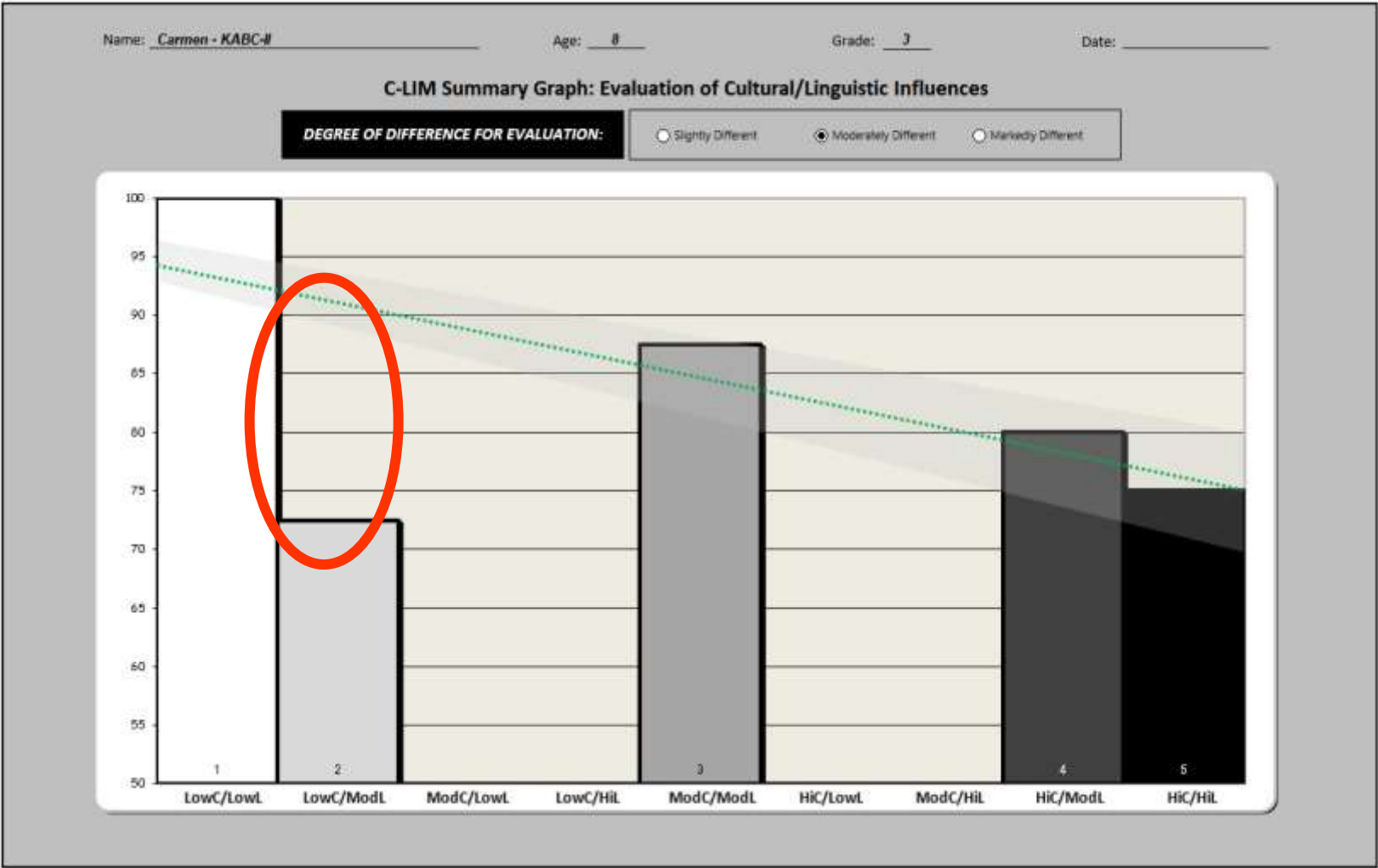

CULTURE/LANGUAGE INFLUENCE: PRIMARY – all test scores are LIKELY INVALID
Interpretation: "average" or typical functioning, <u>no evidence</u> to suggest cognitive or linguistic deficits that might support disability.

General Steps for Application and Interpretation of the C-LIM: Step 3

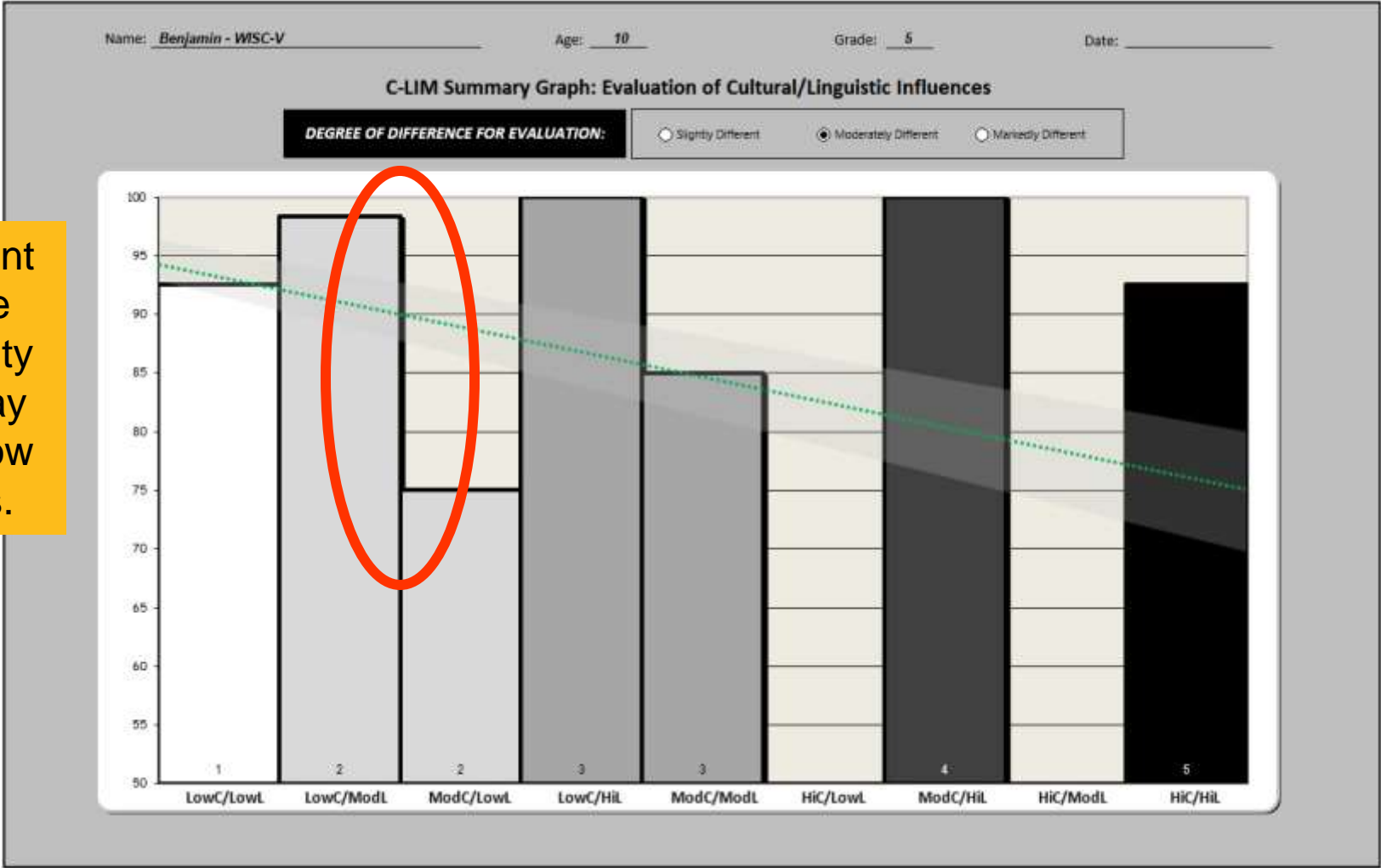**General pattern of decline <u>OR</u> one or more scores below expected range for ELs.**

Name: *Carmen - KABC-II*   Age: *8*   Grade: *3*   Date: _____

C-LIM Summary Graph: Evaluation of Cultural/Linguistic Influences

DEGREE OF DIFFERENCE FOR EVALUATION: ○ Slightly Different   ● Moderately Different   ○ Markedly Different

Y-axis: 50 to 100

X-axis categories: LowC/LowL, LowC/ModL, ModC/LowL, LowC/HiL, ModC/ModL, HiC/LowL, ModC/HiL, HiC/ModL, HiC/HiL

CULTURE/LANGUAGE INFLUENCE: CONTRIBUTORY – low test scores are LIKELY VALID.

Interpretation: suggests possible evidence of cognitive or linguistic deficit that may be confirmed with additional testing and evaluation.

General Steps for Application and Interpretation of the C-LIM: Step 3

No general pattern of decline.

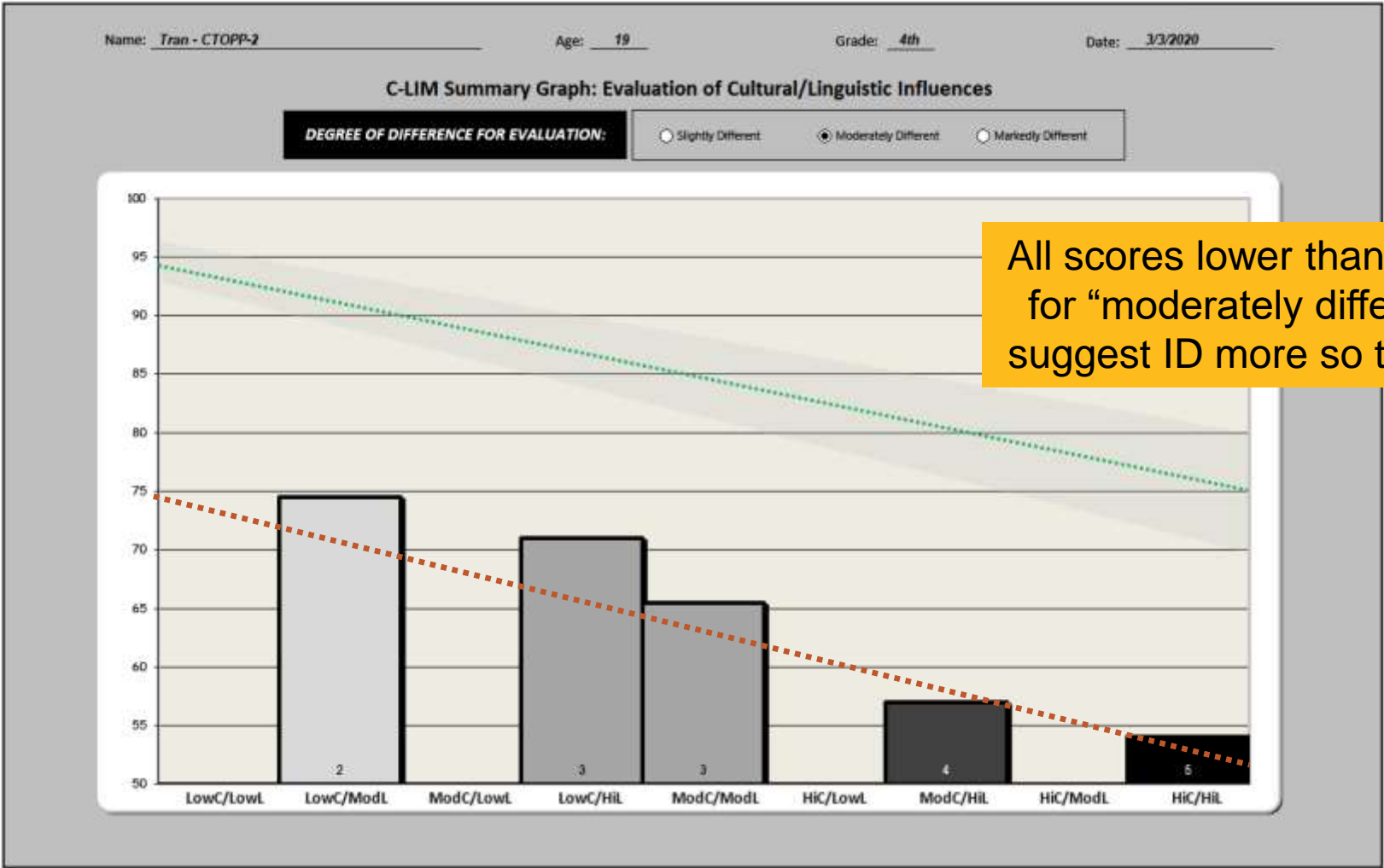Important to note variability that may mask low scores.

Name: _Benjamin – WISC-V_   Age: _10_   Grade: _5_   Date: _____

C-LIM Summary Graph: Evaluation of Cultural/Linguistic Influences

DEGREE OF DIFFERENCE FOR EVALUATION: ○ Slightly Different   ◉ Moderately Different   ○ Markedly Different

1 LowC/LowL	2 LowC/ModL	2 ModC/LowL	3 LowC/HiL	3 ModC/ModL	HiC/LowL	4 ModC/HiL	HiC/ModL	5 HiC/HiL

CULTURE/LANGUAGE INFLUENCE: MINIMAL – test scores are LIKELY VALID.

Interpretation: suggests possible evidence of cognitive or linguistic deficit that may be confirmed with additional testing and evaluation.

General Steps for Application and Interpretation of the C-LIM: Step 3

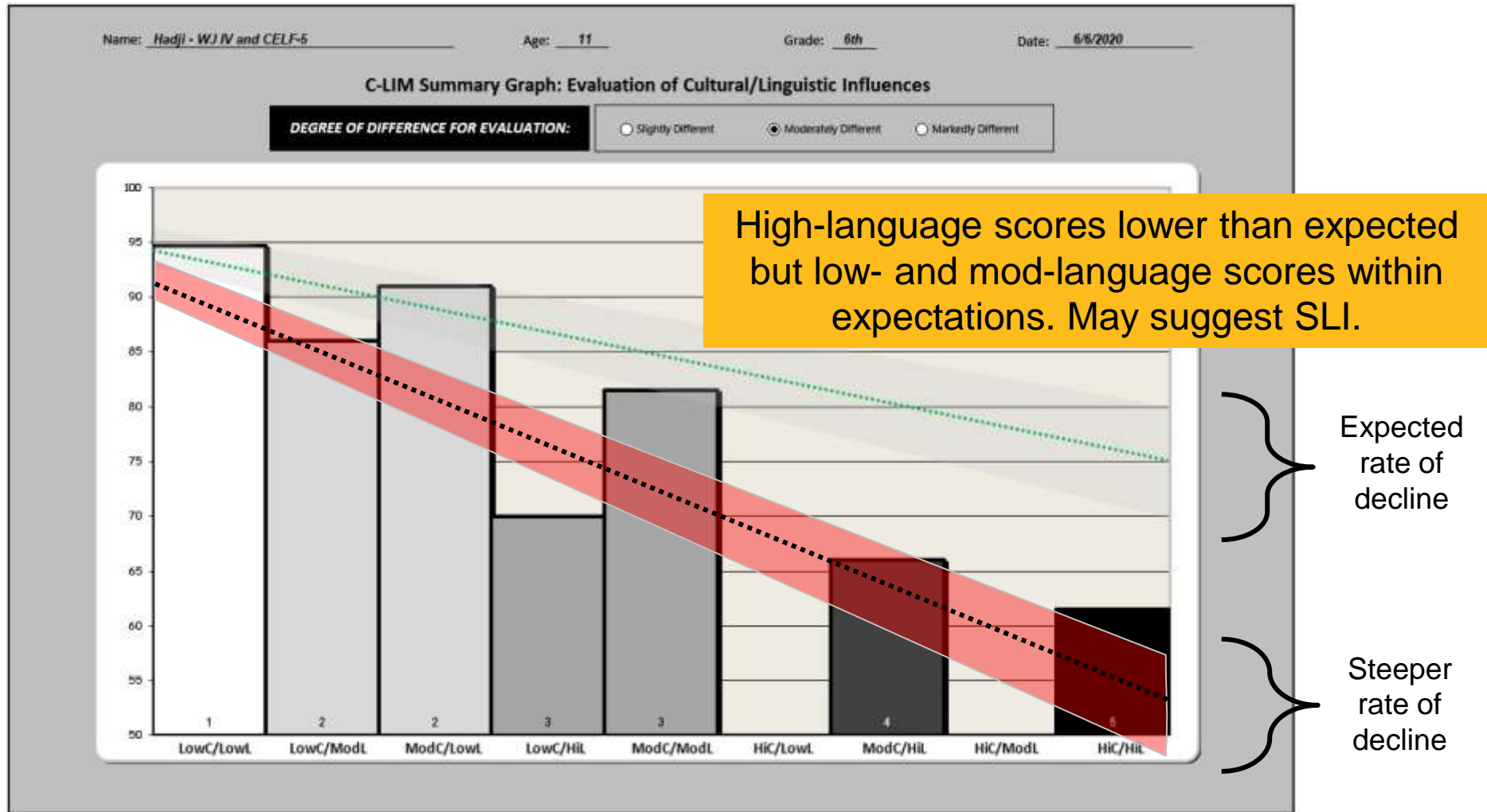**General pattern of decline, but all scores NOT within expected range**

Name: *Tran - CTOPP-2*   Age: *19*   Grade: *4th*   Date: *3/3/2020*

C-LIM Summary Graph: Evaluation of Cultural/Linguistic Influences

DEGREE OF DIFFERENCE FOR EVALUATION: ○ Slightly Different   ⊙ Moderately Different   ○ Markedly Different

All scores lower than expected range for "moderately different" ELs. May suggest ID more so than SLD or SLI.

Categories (x-axis): LowC/LowL, LowC/ModL, ModC/LowL, LowC/HiL, ModC/ModL, HiC/LowL, ModC/HiL, HiC/ModL, HiC/HiL

CULTURE/LANGUAGE INFLUENCE: CONTRIBUTORY – low test scores are LIKELY VALID.

Interpretation: suggests possible evidence of general cognitive deficit that may be confirmed with additional testing and evaluation.

General Steps for Application and Interpretation of the C-LIM: Step 3

General pattern of decline BUT not all scores within expected range

Name: *Hadji - WJ IV and CELF-5*   Age: *11*   Grade: *6th*   Date: *6/6/2020*

C-LIM Summary Graph: Evaluation of Cultural/Linguistic Influences

DEGREE OF DIFFERENCE FOR EVALUATION: ○ Slightly Different   ◉ Moderately Different   ○ Markedly Different

> High-language scores lower than expected but low- and mod-language scores within expectations. May suggest SLI.

Expected rate of decline

Steeper rate of decline

LowC/LowL   LowC/ModL   ModC/LowL   LowC/HiL   ModC/ModL   HiC/LowL   ModC/HiL   HiC/ModL   HiC/HiL

CULTURE/LANGUAGE INFLUENCE: CONTRIBUTORY – low test scores are LIKELY VALID.
Interpretation: suggests possible evidence of language-related learning deficit that may be confirmed with additional testing and evaluation.

General Steps for Application and Interpretation of the C-LIM: Step 4

Culture-Language Interpretive Matrix - Sample Interpretive Statements
Conceptualization by D. P. Flanagan, S. O. Ortiz, & V. C. Alfonso; Programming by S. O. Ortiz and A. M. Dynda.
Copyright 2017 © Samuel O. Ortiz, Dawn P. Flanagan & Vincent C. Alfonso. All Rights Reserved

Sample Interpretive Statements

Listed below are some sample validity statements that provide a general framework for how results from analysis with the C-LIM may be worded and prepared for inclusion in an evaluation report. There are four statements that may apply to four different evaluation scenarios. Statement 1 may be used in cases conducted for the purpose of suspected learning disability and where use of the C-LIM resulted in a declining pattern within the expected range suggesting that test scores were likely invalid and due primarily to the influence of cultural and linguistic variables on test performance. Statement 2 is also written for cases conducted for the purpose of evaluating suspected learning disability but where a declining pattern indicated a contributory effect of cultural and linguistic factors but there was at least one area below expectations suggesting the test results were possibly valid and with additional data and evidence, did eventually support limited difficulties such as a learning disability. The third and fourth statements are similar to the second and apply in cases where the test results also show a contributory influence from cultural and linguistic factors but the pattern and magnitude of the scores are more

These statements are Copyright © 2015, Samuel O. Ortiz but have been released in the public domain to assist practitioners in describing their findings and designed for use in report writing. Therefore permission is granted to freely use and copy, in edited or un-edited form, any and all of the following statements to suit the user's needs as long as the purpose is educational and not for profit. In addition, it is not necessary to display any copyright statement and there is no need to provide any reference or citation the original source. These statements are offered only as guide and framework for crafting appropriate descriptive statements following analysis of the impact of cultural and linguistic factors on test performance. The statements can be easily personalized by changing the words, "the student" to the examinee's actual name. However, as no statement can apply specifically to all cases in all circumstances, users are cautioned to ensure that any necessary edits or modifications are utilized to ensure the accuracy of these statements as

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.

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 language 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, reveals an overall pattern of decline that is typical of and within the range that would be expected of other individuals with similar cultural and linguistic backgrounds. This overall, declining pattern of test performance suggests that test performance was likely due *primarily* to the influence of cultural and linguistic factors rather than lack of actual ability. Accordingly, the test results evaluated here are *unlikely to be valid* and do not provide a defensible basis to permit interpretation of the intended abilities that were the focus of the evaluation. However, given that the observed pattern and the magnitude of the scores are consistent with research-based performance that is typical of other non-disabled individuals with comparable linguistic development and educational experiences and who are of average ability or higher, it can be reasonably concluded that the student's abilities are also at least within the average range of performance (or possibly higher) and strongly suggests that the test scores do not support the presence of any type of disability. Consequently, it is believed that the academic difficulties observed in classroom performance and which prompted this evaluation are most 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 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 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 or other cognitive-based disorder.

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

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

C-LIM Analyzer | C-LIM Notes | C-LTC Reference | **C-LIM Statements**

General Steps for Application and Interpretation of the C-LIM: Step 4

Sample Validity Statement for EL 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.

General Steps for Application and Interpretation of the C-LIM: Step 4

Sample Validity Statement for EL Evaluations

Simplified Validity Statement for LIKELY disability 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 ***can 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 identification of a suspected cognitive/academic-based disability; 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.

Sample Validity Statement for EL Evaluations

Simplified Validity Statement for UNLIKELY disability 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 disability is present in this case. This means that although XXXX is having difficulties in the classroom, the problems are most likely to attributable to, and primarily the result of, the normal process of second language and acculturative knowledge acquisition.

Meeting Standards for Fairness in Evaluation of ELs

Although there are no professional or legal standards that specify actual procedures for evaluation of English learners or determining the impact of exclusionary factors related to linguistic/cultural differences, there are consensus recommendations that provide some guidance in being able to document and establish that a given evaluation has been conducted in compliance with standards necessary to demonstrate and establish such consideration and fairness. The following are standards that may be used to bolster conclusions regarding exclusionary factors and fairness.

1. **TOOLS AND PROCEDURES:** The report contains a section detailing the deliberate selection of tools, methods, and procedures with respect to the cultural and linguistic factors in the examinee's background—simply listing tests, even native language ones, is not sufficient. Explanations are provided for any modification or alteration to the administration or scoring of any standardized instrument, including use of a translator or translated test.

2. **DEVELOPMENTAL LANGUAGE HISTORY:** The report contains a specific and distinct section on language development which contains a detailed history and sufficient information with which to formulate appropriate expectations of current proficiency. Information should include, at a minimum, age of first exposure to all languages, parental/home language use, parental levels of proficiency in all languages, parental education and socio-economic status, individual's experiences with all languages, current proficiency in all languages, amount of formal education in all languages, and type of educational programming.

3. **VALIDITY:** The report contains a section that provides a discussion regarding the validity of the obtained assessment data and any collected test scores including specification regarding how the impact of cultural/linguistic differences were considered and excluded as factors that might have compromised validity of the information—simply stating that scores or data are valid is insufficient.

4. **INTERPRETATION OF RESULTS:** Discussion of results, whether cognitive, linguistic, or academic, are always presented in terms of the extent to which cultural or linguistic factors may have compromised performance and affected interpretive validity and the extent to which they are consistent with or not consistent with what would be reasonably expected of the examinee, given their unique cultural and linguistic background.

5. **DIAGNOSTIC IMPRESSIONS:** The report contains conclusions and interpretations that are supported by integration of data and includes discussion regarding how cultural/linguistic factors are not the primary reasons for any claimed deficits and that such deficits are above and beyond what would be expected given the examinee's unique cultural/linguistic background.

Assessment and Related Resources

RESOURCES:

C-LIM Resources - free
http://facpub.stjohns.edu/~ortizs/CLIM/index.html

Ortiz, S. O. (2019). On the Measurement of Cognitive Abilities in English Learners. Contemporary School Psychology, Vol. 23(1) 68-86. https://doi.org/10.1007/s40688-018-0208-8

Ortiz, S. O. (2017). Evaluation of English Learners: Issues in measurement, interpretation and reporting. The Score, APA Division 5 (Quantitative and Qualitative Methods) Newsletter, January 2017. Available at http://www.apadivisions.org/division-5/publications/score/2017/01/english-learners.aspx

Kovaleski, J. F., Lichtenstein, R. Naglieri, J., Ortiz, S. O., Klotz, M. B. & Rossen, E. (2015). Current Perspectives in the Identification of Specific Learning Disabilities. Communiqué, 44(4).

Whittaker, M. & Ortiz, S. O. (2019). Exclusionary Factors—What a Specific Learning Disability is Not: Examining exclusionary factors. National Center for Learning Disabilities, Washington DC. Available at https://www.ncld.org/wp-content/uploads/2019/09/What-a-Specific-Learning-Disability-Is-Not-Examining-Exclusionary-Factors.pdf

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 Picture Vocabulary Acquisition Test (Ortiz PVAT)
https://www.mhs.com/ortizpvat
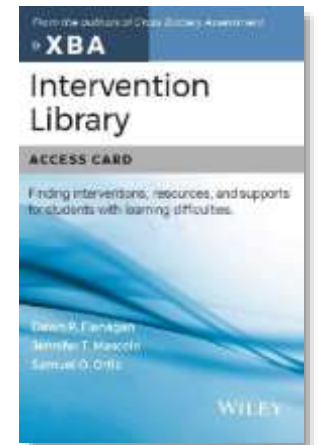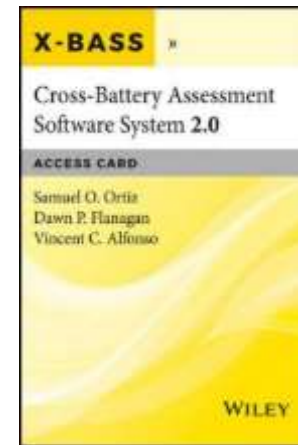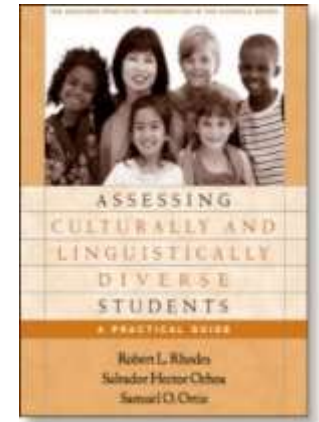
Additional Readings and Related References

- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education (2014). Standards for educational and psychological testing. Washington DC: American Educational Research Association.

- Bialystok, E. (2001). Bilingualism in development: Language, literacy and cognition. Cambridge: Cambridge University Press.

- Cormier, D. C., McGrew, K. S., & Ysseldyke, J. E. (2014). The influences of linguistic demand and cultural loading on cognitive test scores. Journal of Psychoeducational Assessment, 32(7), 610–623.

- Cormier, D. C., Bulut, O., McGrew, K. S. & Kennedy, K. (2022). Linguistic Influences on Cognitive Test Performance: Examinee Characteristics Are More Important than Test Characteristics, Journal of Intelligence, 10, 1. https://doi.org/10.3390/jintelligence10010008

- Cummins, J. C. (1984). Bilingual and special education: Issues in assessment and pedagogy. Austin, TX: PRO-ED.

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

- Grosjean, F. (1989). Neurolinguists beware!: The bilingual is not two monolinguals in one person. Brain and Language, 36, 3-15.

- Krashen, S.D. (1982). Principles and Practice in second language acquisition. New York: Pergamon Press.

- Ortiz, S. O. (2019). On the Measurement of Cognitive Abilities in English Learners. Contemporary School Psychology, Vol. 23(1) 68-86. https://doi.org/10.1007/s40688-018-0208-8

- Ortiz, S. O. (2018). Ortiz Picture Vocabulary Acquisition Test (Ortiz PVAT). Toronto, Canada: Multi-Health Systems.

- Ortiz, S. O. (under review). Best Practices in Nondiscriminatory Assessment. In P. Harrison & A. Thomas (Eds.) Best Practices in School Psychology VII, Bethesda, MD: National Association of School Psychologists.

- Ortiz, S. O., Piazza, N., Ochoa, H. S. & Dynda, A. M. (2018). Testing with Culturally and Linguistically Diverse Populations: Moving beyond the verbal-performance dichotomy into evidence-based practice. In D. P. Flanagan and E. McDonough (Eds.), Contemporary Intellectual Assessment, Fourth Edition (pp. 684-712). New York: Guilford Press.

- 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, 50(8), 781–797.

- Valdés, G., & Figueroa, R. A. (1994). Bilingualism and testing: A special case of bias. Norwood, NJ: Ablex.