



ORTIZ PVAT™
ORTIZ PICTURE VOCABULARY ACQUISITION TEST™
Introduction & Application

Amy Patenaude, Ed.S., NCSP
MHS Assessment Consultant ~ School Psychologist





Your Presenter



I put years of studying, sweat and tears into it, so yes, I am going to put NCSP after my name on EVERYTHING.

Amy Patenaude, Ed.S., NCSP
MHS Assessment Consultant
Amy.patenaude@mhs.com
@Amy_Patenaude
<https://www.linkedin.com/in/amypatenaude>






Disclosure

I work for Multi-Health Systems (MHS), the publisher of the assessment tool that we will be discussing today.

Rating scales should not be used as the sole basis for making a diagnosis or educational eligibility decision.



Training Objectives

- Background on the assessment of English Learners
- Key features of the Ortiz PVAT
- Data collection and psychometric properties of the Ortiz PVAT
- Administration and online scoring of the Ortiz PVAT
- Interpretation of the Ortiz PVAT
- Case study examples for the Ortiz PVAT
- Demonstration of the Ortiz PVAT

Background on the Assessment of English Learners

Diversity population as a percentage of county population, 2018



No matter where you live, **diversity** means you will likely evaluate both native English speakers and English learners as well as individuals from a wide range of ethnic/racial and cultural backgrounds

A Modern Test in an Era of Diversity

Which Test Is More Useful?



A test of English vocabulary for native English speakers only



A test of English vocabulary for both English speakers and learners who speak any language



Primary Goals of the Ortiz PVAT

1. Focus on evaluation of language acquisition and development in an efficient manner (avoid nonverbal approach);
2. Ensure applicability for both native English speakers and English learners (integrate fairness issues in construction);
3. Provide valid test scores regardless of the examinee's native language and current level of English proficiency (control for differences in exposure to English);
4. Create an assessment that does not require the administrator to be bilingual or use a language other than English for administration (embrace universal design concepts).



Key Features of the Ortiz PVAT



Key Features

- 10 to 15 minutes to administer
- Ecologically valid visual stimuli
- Neutral audio recording
- Parallel Forms: Form A & Form B
- Ages: 2 years 6 months to 22 years 11 months
- Fully Digital with built-in basal and ceiling
- Parts of Speech and word types assessed
- Comprehensive, Computerized reports
- Answers the question is it a difference or a disorder?
- Revolutionary dual normative samples with control for English exposure



Data Collection Procedures for the Ortiz PVAT

Data Collection

- Data collection took place from November 2015 to June 2016
- 2 general population samples were collected
 - English Speakers
 - English learners

English Speaker Normative Sample

- Data collected to match 2014 U.S. Census Data
- Defined as "speak only English"
- Gender was balanced within each age group
- Target demographic variables were collected:
 - Race/ethnicity, geographic region, and parental education level (PEL)
 - 1,530 individuals in normative sample



PVAT

Y M I X

Ortiz PVAT English Speaker Normative Sample

English Learner Normative Sample

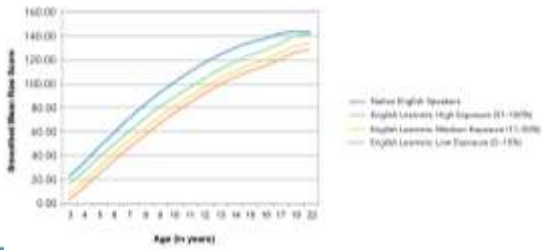
- Data were collected to match demographic characteristics in the US population with exposure to a language other than English based on the 2014 American Community Survey
- Inclusion in this sample required that the individual's first language was either a language other than English or English in combination with another language
- 1,190 individuals included in this sample



PVAT

Y M I X

Continuous Norming



Psychometrics of the Ortiz PVAT

PVAT

© 2018

Reliability

PVAT

© 2018

Alternate Form Reliability

| Sample | Observed r | Corrected r | N | Form A | | Form B | | Corrected r |
|------------------|--------------|---------------|-------|--------|------|--------|------|---------------|
| | | | | M | SD | M | SD | |
| English Speakers | .98 | .98 | 1,538 | 900.0 | 95.2 | 180.1 | 15.1 | .97 |
| English Learners | .92 | .91 | 1,708 | 100.0 | 19.4 | 181.1 | 18.4 | .91 |

Note: All correlations significant, $p < .001$. Guidelines for interpreting: small = .10, medium = .30, large = .50. Guidelines for interpreting Corrected r : small = .05, medium = .10, large = .15, very large = .20. Guidelines for interpreting Corrected r : small = .05, medium = .10, large = .15, very large = .20.

Internal Consistency

- Marginal reliability coefficient of the Ortiz PVAT is .98
- Marginal reliability coefficient for the clinical sample is .99

Test-Retest Reliability

- Assessed over a 2-week to 4-week period
- English speakers corrected $r = .81$ (Form A) and $.75$ (Form B)
- English Learners corrected $r = .72$ (Form A) and $.76$ (Form B)
- All $p < .001$

Validity



Content Validity

- Validity of the Ortiz PVAT assessed by extensive subject-matter experts
 - SLPs and psychologists
 - Extensive knowledge in language development and the assessment of culturally and linguistically diverse populations



Internal Structure

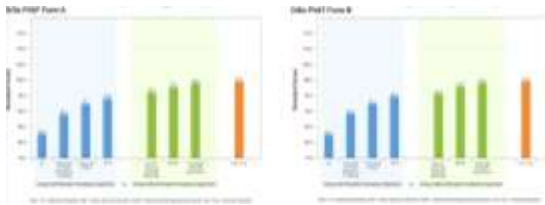
- Unidimensional nature of vocabulary
- Inter-item correlations ranged from $-.47$ to $.73$ (median $r = .044$)



Relationship to Clinical Diagnosis

- Intellectual Disability
- Language Disorder with receptive (or mixed receptive-expressive impairment)
- Language Delay with receptive (or mixed receptive-expressive) impairment
- Autism Spectrum Disorder (ASD)
- Specific Learning Disability with impairment in reading
- Attention-Deficit/Hyperactivity Disorder
- Language Disorder with expressive impairment

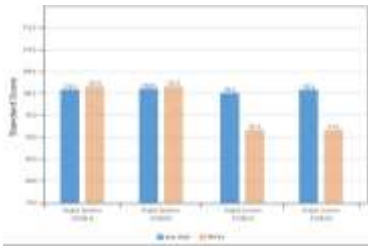
Clinical Group Performance on Ortiz PVAT



Relationship to Other Measures

- Peabody Picture Vocabulary Test, Fourth Edition
- Wechsler Intelligence Scale for Children

Performance on the Ortiz PVAT & PPVT-4



PVAT

WISC

Ortiz PVAT & WISC VCI

| Form | Observed r | Corrected r | N | Standard Scores | | | | Cohen's d |
|--------|------------|-------------|----|-----------------|------|----------|------|-----------|
| | | | | Ortiz PVAT | | WISC VCI | | |
| | | | | M | SD | M | SD | |
| Form A | .83 | .58 | 70 | 85.8 | 18.9 | 85.4 | 18.5 | -0.03 |
| Form B | .73 | .49 | 70 | 82.0 | 14.4 | 85.4 | 18.5 | -0.32 |

Note: PPVT-4 VCI = Wechsler Intelligence Scale for Children - Fourth Edition - Vocabulary Composite Index. An omnibus significant $\chi^2 = .027$. Guidelines for interpreting r : weak = .10, medium = .30, large = .50. Guidelines for interpreting Cohen's d : small effect size = 0.20, medium effect size = 0.50, large effect size = 0.80. Significant r values indicate scores on the Ortiz PVAT were higher than scores on the WISC VCI.

PVAT

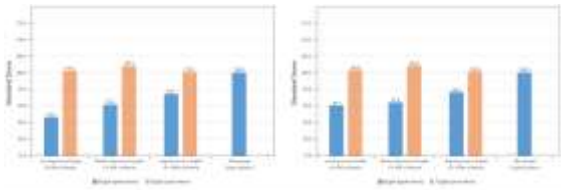
WISC

Fairness

PVAT

WISC

Standard Score Comparisons Across Reference Samples



PVAT

1111

English Learners: Languages Spoken

| Form | Language Spoken | N | M | SD | F-adj | p | Percentile Comparison (N = 211) | Number of |
|--------|-------------------------------|-----|-------|------|-------|------|---------------------------------|-----------|
| Form A | Spanish & Spanish Creole | 472 | 101.5 | 19.5 | 1.02 | .001 | 88 | 100 |
| | Other Languages Spoken | 181 | 88.4 | 19.7 | | | | |
| | Spanish & Puerto Rican Creole | 120 | 88.8 | 19.4 | | | | |
| | Other Languages | 30 | 88.9 | 19.4 | | | | |
| Form B | Spanish & Spanish Creole | 472 | 101.7 | 19.8 | 1.02 | .009 | 88 | 100 |
| | Other Languages Spoken | 181 | 88.8 | 19.7 | | | | |
| | Spanish & Puerto Rican Creole | 120 | 89.0 | 19.4 | | | | |
| | Other Languages | 30 | 89.9 | 19.4 | | | | |

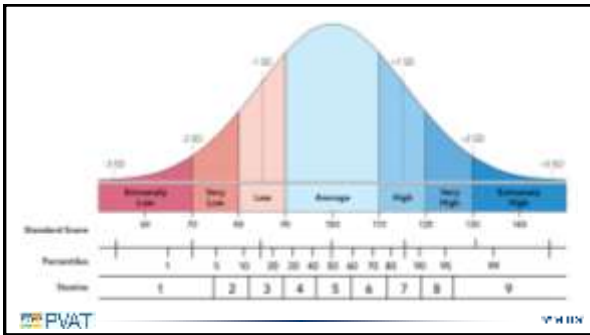
PVAT

1111

Interpretation of the Ortiz PVAT

PVAT

1111



Summary of Ortiz PVAT Scores

| Ortiz PVAT Score | Minimum | Maximum | Midpoint | Standard Deviation |
|------------------|---------|---------|----------|--------------------|
| Raw Score | 0 | 167 | n/a | n/a |
| Standard Score | 55 | 145 | 100 | 15 |
| Percentile Rank | 1 | 99 | 50 | n/a |
| Stanine | 1 | 9 | 5 | 2 |
| Age Equivalent | <2.6 | >19.3 | n/a | n.a |



Progression from BICS to CALP

Relation between Age, Grade, and Word Type for Native English Speakers

| 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 | | | | |

Basic Interpersonal Communicative Skills (BICS; Cummins, 1984)

- We learn more common and frequent words first—particularly those related to general communicative proficiency

Cognitive Academic Language Proficiency (CALP)

- Education expands our proficiency by including more formal, academic words as well as incidentally encountered words (e.g., via reading, advanced language models, extended discourse)



Interpretation of the Ortiz PVAT Scores

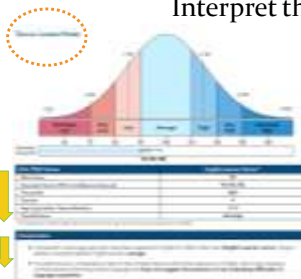
- Establish Context and Determine Validity
- Interpret the Scores
- Review Instructional Needs & Intervention Recommendations
- Examine Performance by Vocabulary Type

Establish Context and Determine Validity

- Review student demographic information
- Form administered
- Norms used for scoring
- Number of items presented



Interpret the Scores



- Specifies the norm sample used to determine scores:
 - English Speaker norms
 - English Learner norms accounting for English exposure
- Scores provided include:
 - Raw Score
 - Standard Score (with 95% CI)
 - Percentile Rank
 - Stanine
 - Age Equivalent
 - Classification for performance range
- Provides a brief description and interpretation of results

General Administration Guidelines

- Ages 2 years 6 months to 22 years 11 months
- Takes approximately 10-15 minutes to administer
- Ceiling 5 errors on 10 consecutive items
- Not a timed assessment of vocabulary
- Can be administered on a desktop, laptop, or tablet
- It is critical that the audio component is clear and comprehensible
- Examinees can use a computer mouse, touchpad on a laptop, or a touchscreen to select their responses
- Administer on an individual basis, in person with little distractions



System Requirements for the Ortiz PVAT

MHS Assessment Center+

- Microsoft Internet Explorer® version 11
- Mozilla Firefox® version 45.0
- Google Chrome® version 55
- Apple Safari® version 8.0
- Screen resolution of 1366 × 768 pixels

Ortiz PVAT Application

- Windows® 8.1, Windows® 10
- Dual-Core 2.4 GHz processor
- 512 MB of RAM
- 1.1 GB of hard drive disk space
- Screen resolution of 1366 × 768 pixels
- A mouse, pointing device, or touchscreen device
- Internet access (at minimum, to initiate the assessment and to send results to the Portal for scoring and reporting)
- **IOS application now available!**



Case Study Examples



Example Case Study: Dandee L.



PVAT

WHS

8 year-old girl
Native English speaker
Quiet at school
Quiet at home but older siblings reported to have same pattern
Speech-language pathologist was called in



WHS



During interview, SLP noted:

- reticence to speak
- hesitancy to engage in any verbal activities
- uncertainty about Dandee's ability to comprehend


The Ortiz PVAT is

- highly engaging for young children
- requires no speech on the part of the examinee

SLP decided: It's an ideal test to begin the evaluation

PVAT

WHS




The Ortiz PVAT automatically:

- establishes the basal based using Screener items
- establishes the ceiling
- captures responses
- scored online

Dandee's behavior was easily observed during testing:

- Interacted with the auditory and visual stimuli in an attentive manner
- Clearly recognized the meaning by clicking without hesitation on the correct image


Dandee's **standard score of 92** places her performance in the *Average* range—rules out receptive language difficulties



Major Benefits:

SLP was able to reassure the teacher that Dandee was **capable of understanding** all classroom instruction

SLP shared the **instructional strategies** with the teacher to ensure Dandee would continue to progress normally in her language development



Additional Benefit:


SLP designed **intervention goals** based on Dandee's current level of vocabulary acquisition in different parts of speech and various level of BICS and CALP words


For individuals identified as having a disability, the percent correct can be used as baselines to assist in writing measurable goals and objectives

Meet Bennie

same age, same grade,
same concerns...

different language






With respect to using the Ortiz PVAT, the language difference in this case **does not prevent** its use

The dual-norms: a **set of norms for Bennie** that provide comparison to other English learners for diagnostic purposes just as it did for Dandee

Bennie's **score of 102** places his performance within the **Average range**—vocabulary acquisition in English is comparable to his true English learner peers (does not suggest any type of language problem)



For Bennie (an English learner):

- Higher instructional level needs (his vocabulary is at a lower level linguistically than Dandee's)
- Because he is expected to eventually reach grade-level standards, Bennie will likely **need some instructional modifications** to assist in improving his vocabulary acquisition and learning
- **Specific recommendations** for intervention are provided and are keyed to Bennie's instructional level and age/grade to ensure that they are linguistically appropriate for him as an English learner
