



COLORADO

Department of Education

Dynamic Assessment for School-Based SLPs

From Research to Practical Strategies and Implementation

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Logistics



1. Rename yourself: First and Last Name
2. Keep your **cameras on** and **stay engaged!**
3. Put your **questions** in the Q&A or the chat
4. Use the **Raise Hand** feature to come off of mute
5. **Evaluation/Certificate:** You must complete the course evaluation at the end of the session today in order to receive your professional development certificate

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Enhancing Accuracy and Reducing Bias in Speech-Language Evaluations: The Role of Comprehensive and Dynamic Assessment from Research to Practice

Colorado Department of Education
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Betz, S., Eickhoff, J., & Sullivan, S. (2013). Factors Influencing the Selection of Standardized Tests for the Diagnosis of Specific Language Impairment. *Language, Speech, and Hearing Services in Schools, 44*, 133-146. 1/3



Most SLPs used omnibus language tests (CELF, PLS, CELF-P, etc.) and single word vocabulary tests (PPVT, EOWPVT, ROWPVT, etc.).

When asked why the SLPs selected a certain test, publication date was the *only* test characteristic that correlated with frequency of test use.

Betz, S., Eickhoff, J., & Sullivan, S. (2013). Factors Influencing the Selection of Standardized Tests for the Diagnosis of Specific Language Impairment. *Language, Speech, and Hearing Services in Schools, 44*, 133-146. 2/3



These findings indicate that validity, reliability and discriminant accuracy were *not associated* with the reasons the SLPs identified for using a particular test. (Betz, et al, 2013; Fulcher-Rood, et al., 2020).

Betz, S., Eickhoff, J., & Sullivan, S. (2013). Factors Influencing the Selection of Standardized Tests for the Diagnosis of Specific Language Impairment. *Language, Speech, and Hearing Services in Schools, 44*, 133-146. 3/3

The use of longstanding tests might save time, yet it can prevent SLPs from using tests based on cutting edge research.

Many of the currently used tests identify language disorders *based on theories that were cutting edge 30, 40 and 50 years old.*



Any evaluator who uses a test to identify disability without analyzing its psychometric integrity is doing a disservice to the students they evaluate.

E.g., What is the reference standard for sensitivity and specificity? Is it appropriate?

(Betz, et al., 2013; Crowley, 2010; Dollaghan, 2007).



What does the research tell us about standardized tests?

There is a longstanding and growing body of research showing the problems with using current omnibus language tests to identify a **language disorder**. (E.g., McCauley & Swisher, 1984; Vance, & Plante, 1994; Peña & Quinn, 1997; Gray, et al, 1999; Stockman, 2000; Crowley, 2010; Betz, et al, 2013; Denman, et al, 2017; Barragan, et al, 2018, Castilla-Earls, et al 2020; Chiat & Poliškenská, 2016; Hart & Risley, 1985; Fernald, et al, 2013; Marencin, et al, 2024)

This research shows the most widely used standardized language tests:

- Have serious validity problems;
- Have racial and cultural biases;
- Cannot distinguish a language disorder from learning English as a new language or from lack of adequate instruction in reading or math.



Standardized Assessments and EBP 1/3

Research shows cultural and racial biases in standardized language tests

- Diagnostic accuracy is affected by the cultural, linguistic, and socioeconomic backgrounds of the student being assessed. Stockman, 2000, Pena & Quinn, 1997.
- Children who speak a variety of English other than General American English are regularly misidentified as having a language disorder using the CELF-5. Henricks & Adlof, 2017.
- Typically developing Latino DLLs from lower income background, attending English-only schools are overidentified as presenting with LI using the CELF-4S. Barragan, et al., 2018.



Standardized Assessments and EBP 2/3

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Standardized Assessments and EBP 3/3

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We use standard norms for other tests, for example we compare a student's and a school's 4th grade reading performance to the national average.

What is the difference?

How fair is this to an AA boy whose mother had an 8th grade education or less?

Dr. Ida Stockman, 2000, showed the mean for these boys on the PPVT-3 was not 100, it was 77.



The use of standardized tests is part of the implicit bias in our field's most widespread clinical practice.

With these fundamental flaws in the diagnostic accuracy of standardized omnibus language tests, and our professed interest in evidence-based practice, we would expect that few would be using these tests today.



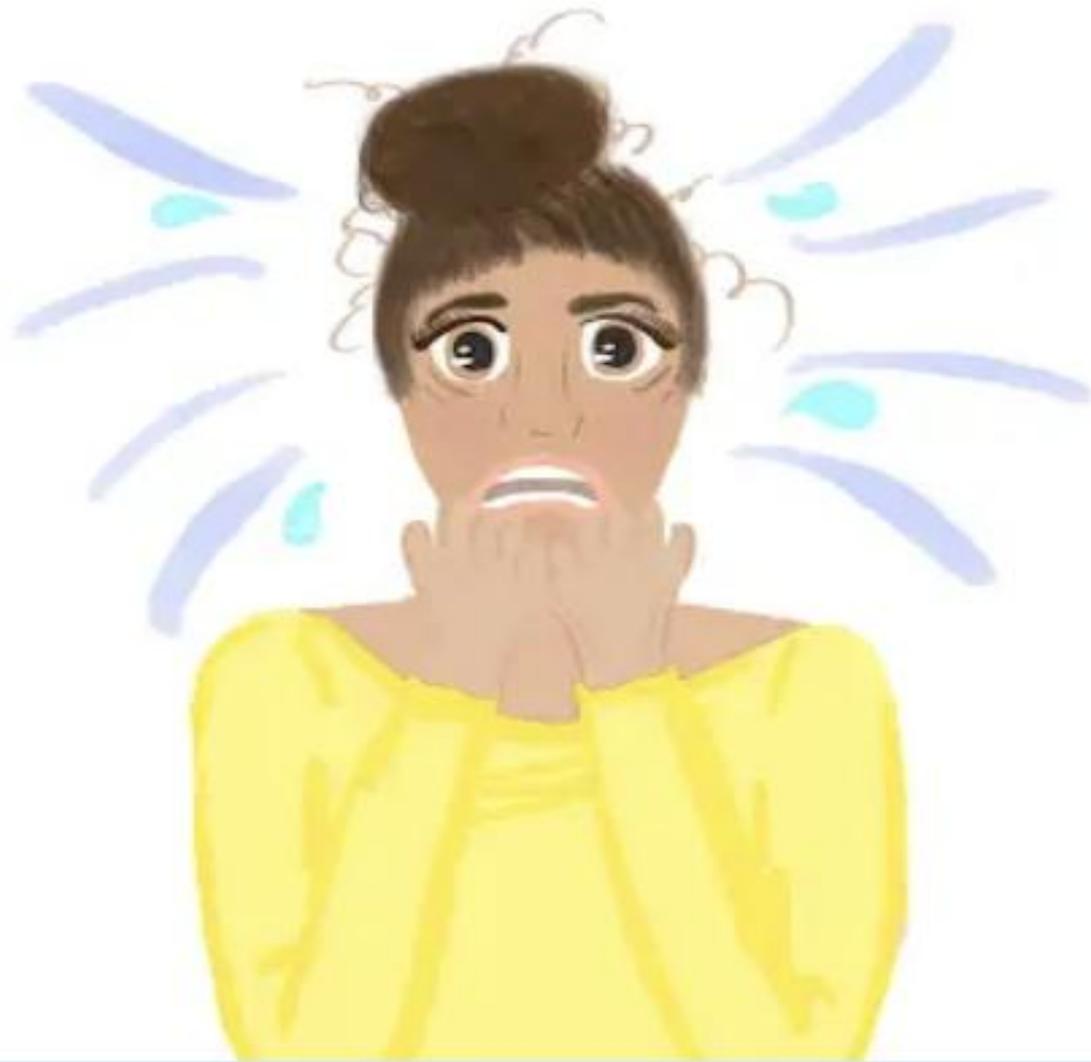
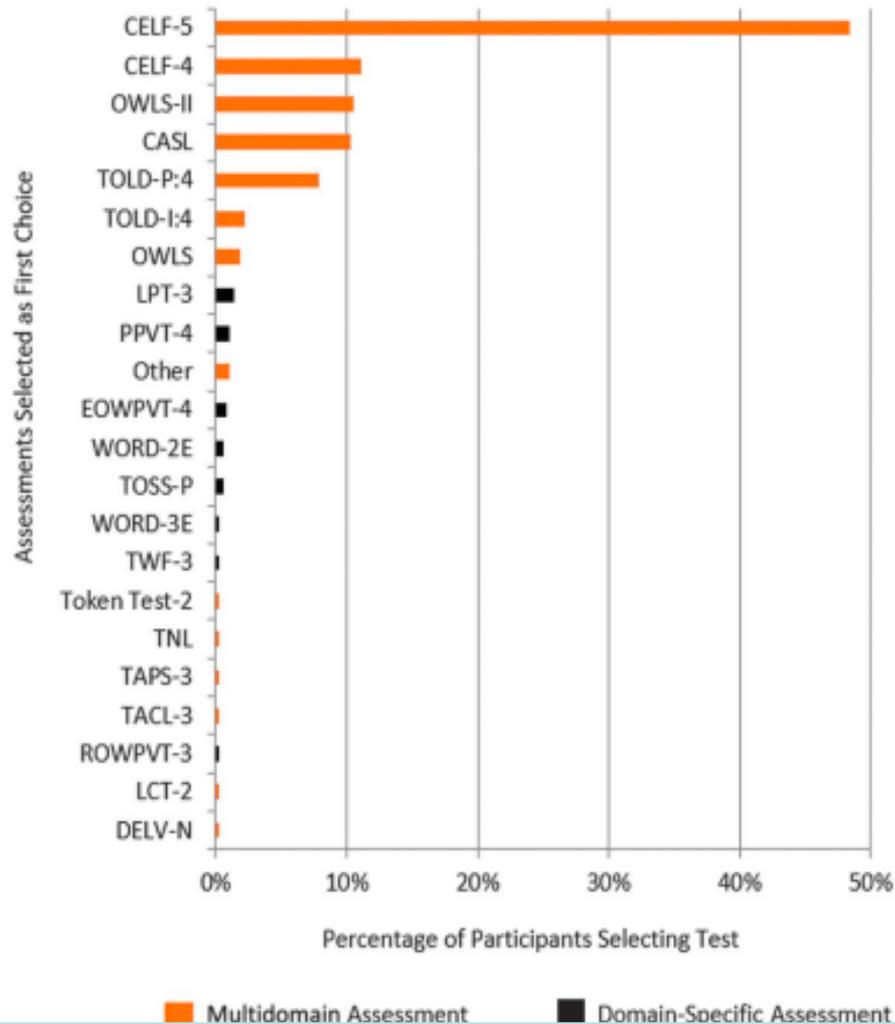


Figure 1. Norm-referenced tests that are most frequently selected as first-choice language tests. Full test names are listed in the Appendix.



Ogiela, D. & Montzkaa, J. (2021) Norm-Referenced Language Test Selection Practices for Elementary School Children With Suspected Developmental Language Disorder. *Language, Speech, and Hearing Services in Schools*, 52, 288-303.

Another study found

- In 97% of cases, a standardized test was used to guide clinical decision making.
- About 30% of SLPs did not use a language sample.



(Fulcher-Rood, et al, 2019).

How do SLPs choose the assessment instruments they use to identify a language disorder?



What was taught in most SLP master's programs on assessment, and continues to be taught, about how to analyze language?

- ▶ Use Brown's morphemes
- ▶ Bloom and Lahey, Content (categories), Form (SAE) and Use
- ▶ How to give omnibus language and vocabulary tests like PPVT, EOWPVT, ROWPVT, CELF, PLS, TOLD, TELD, OWLs, CASL, etc. etc.
- ▶ SALT and SUGAR tend to be mostly analysis of MLUs and vocabulary NDW, TTR (Fulcher-Rood, et al, 2019)

What's the problem with using Brown's morphemes?

- ▶ Obligatory only for one variety of English—SAE/MAE/GAE
 - ▶ Third person singular present tense: “She cooks”
 - ▶ Plural marker S: “two dogs”
 - ▶ Possessive marker ‘s : “John’s book”
 - ▶ Regular past tense “Yesterday she cooked”
 - ▶ Copula “He is fine”
 - ▶ Auxiliary be. “We are swimming”

Another example: **Word Structure of the CELF-5**

20 of 33 items on Word Structure are nonobligatory features of many varieties of American English (60%)

- ▶ Regular plurals: **Here is one book. Here are two books.**
- ▶ Possessive nouns: **Whose dog is this? It is (Jack's, but also Jack dog)**
- ▶ Contractible copula: **It's red. (it red)**
- ▶ Auxiliary be: **This girl is cutting (The girl cutting)**
- ▶ Regular past tense: **This is the fence that the dog jumped. (This is the fence that the dog jump)**
- ▶ Irregular past tense: **This is the letter that the girl wrote**

How fair is it to assess the language skills of a student who speaks varieties of English other than MAE?

Jamaican English

Southern White Vernacular English

Appalachian English

African American English

Mandarin- or Cantonese-influenced English

Hawaiian Creole (or Pidgin) English

New Orleans (Cajun) English

Gullah English

Miami English

Chicano English

Caribbean Spanish-influenced English

Bajan English

Belizean English

Guyanese English

Standard and Regional Indian Englishes

Yeshiva English

The Englishes of West Africa, e.g., Sierra Leone, Liberia, Ghana, Nigeria

PLS-5 Looks at many concepts that are not naturally acquired but taught and learned

- ▶ Body parts (2-2:5)
- ▶ Look at these crayons. Show me (colors) 4-4:5)
- ▶ Identifies shapes (star, circle, triangle, square) 5:0[5:5)
- ▶ Points to letters (5:6-5:11; 6:0-6:5)
- ▶ Advanced body parts (elbow, forehead, eyelashes, wrist)(5:6-5:11)
- ▶ Demonstrates emerging literacy through print awareness (show me the author's name, the title of the book) (7-7:11)



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Do these tests compare the student's performance with others with substantially similar linguistic, cultural, race/ethnic and socio-economic background?

NO!

Ethical Perspective

ASHA Code of Ethics

Principles of Ethics I. Rules of Ethics

“C. Individuals shall not discriminate . . . on the basis of national origin, including culture, language, dialect, and accent; race....”

Political perspective

“This review article critically interrogates the racist, ableist, and capitalistic ideologies inherent to standardized testing. . . .”

“Could we as practitioners or educators really participate in a racist practice that deliberately oppresses minoritized communities for economic profit? It cannot legitimize our own professional organizations’ involvement in promoting and popularizing these tests.” p. 11. Nair, V., Farah, W. & Cushing,

I. (2023). A Critical Analysis of Standardized Testing in Speech and Language Therapy. *Language, Speech and Hearing Services in Schools*, 1-13. https://doi.org/10.1044/2023_LSHSS-22-00141



Linguistic Perspective

“A Language Test that Stigmatizes Black Children”
by Dr. John McWhorter, *New York Times*, 10/7/22

“Just what does ‘language impaired’ mean, though? Much of the reason this diagnosis is so disproportionate among [African American students] and has been for decades is that too many people who are supposedly trained in assessing children’s language skills aren’t actually taught much about how human language works. And it affects the lives of Black kids dramatically.”



“A Language Test that Stigmatizes Black Children” by Dr. John McWhorter, *New York Times*, 10/7/22 Continued

“I have spent three decades listening to educators, psychologists, other linguists, and speech pathologists giving talks about this lack of fit between speech evaluation tests and linguistic reality, and little seems to change except people in education circles being aware of and dismayed by the problem. Speech pathologists seeking to meaningfully participate in antiracism must start not just questioning but resisting en masse these outdated tests that apply a Dick-and-Jane sense of English on real kids who control a variety of coherent and nuanced Englishes.”



Psychometric Perspective 1/2

A standardized test based on the U.S. census tells us whether the student's language differs from some calculated mean, and perhaps an idealized vision of how students should be speaking (Nair et al., 2023), but this is not the purpose of a speech-language disability evaluation. Rather, it is to learn whether the student had the linguistic capacity to acquire the language/dialect(s) of their homes and communities.

The reference standard for the sensitivity group is defined as whether the students scored 1.5 standard deviations below the mean on any language test and are receiving speech-language services. But this caseload reference standard is not the “gold standard” for identifying a language disorder but rather circular reasoning. If the tests used to identify a language disorder are so accurate, we never need to buy another one! Crowley, C. & Bucaj, E. (2023). Test Review CELF-5
<https://www.leadersproject.org/2014/02/17/test-review-celf-5/>



Psychometric Perspective 2/2

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<https://www.leadersproject.org/2014/02/17/test-review-celf-5/>



Legal Perspective

Federal law (IDEA 2004). “All students are entitled to an assessment with evaluation materials that are selected and administered **so as not to be discriminatory on a racial or cultural basis.** (20 U.S.C. § 1414(b)(3))



Deceptive marketing lawsuit perspective

Last month, a lawsuit was filed on behalf of two Massachusetts families against two reading curriculums marketed by their authors and publishers. But they did not incorporate phonics or phonological awareness despite years of research showing that children needed to be taught these basic skills.

The parents and their lawyers are looking to bring national class action suits against the authors and their publishers.



Where was our Jeri
Logemann of language?



For disability evaluations to meet the standards of practice in ASHA's Code of Ethics, the clinical practice has to change.

This means that most SLPs need to learn new skills in the assessment and evaluation of language.





**The key consideration
in distinguishing between
a language difference
and
a language disorder
is
*the language norm
of the student's
own speech community.***

(Wolfram, Adger & Christian 1999:105)

Identifying a language disorder is not easy.

Traits shared by language/learning disabled students and ELLs

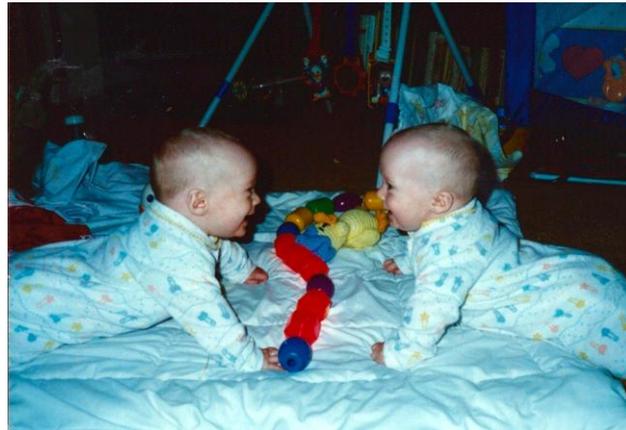
- Low vocabulary and comprehension
- Difficulty following oral directions
(Kohnert, 2008)



Traits shared by language/learning disabled students and ELLs 1/3

- Reading below grade level
- Confusion in sound/symbol associations
- Reversing words and letters

(Kohnert, 2008)



Traits shared by language/learning disabled students and ELLs 2/3

- Poor recall of sequences of syllables
- Difficulty in thinking, organizing, and structuring ideas (Kohnert, 2008)



Traits shared by language/learning disabled students and ELLs 3/3

- The syntax and morphology of children acquiring English will have the same characteristics of the most common speech and language disability--SLI.



(Paradis et al, 2010).



A “Static” Approach assumes prior knowledge and determines whether the student has acquired that knowledge.

A “Dynamic” Approach allows a student to show their skills and look at whether they can acquire new skills.

➤ Castilla-Earls, A., Bedore, L., Rojas, R., Fabiano-Smith, L., Pruitt-Lord, S., Restrepo, M.A., and Peña, E. (2020). Beyond scores: Using converging evidence to determine speech and language services eligibility for dual language learners. *American Journal of Speech-Language Pathology*, 29, 1116–1132. 1/3

How should we be doing evaluations?

Look at converging evidence:

Language samples

Nonword repetition

Dynamic assessment

Parent interview

Teacher interview

Dynamic Learning: Watch for the learning in front of us!

Henry's play skills demonstrated his strong cognitive skills. Henry looked at a few toys before he found the one he wanted. He chose a cash register. After a brief inspection, Henry figured out how to use the cash register.--which button to push to open the door, how to push the buttons for the number amounts, and how to pull the handle to make the bell ring. He also used the cash register functionally. He found some paper that he put in the cash drawers, and then began to "sell" different toys to this evaluator and his father in a highly imaginative play-based activity that he created.

He described how to use the cash register to his father.

"All the money got to get in there" (pointing to the cash drawer).

"Here, Daddy. This is yours" (while handing his father his "change"). When asked how much a block cost, Henry replied, "This one dollar."

Dynamic learning

Psyc Report on 2;9 with ASD

Dynamic assessment demonstrated that George is intelligent and learns quickly. The evaluator showed George how to make a rubber duck fly into the air by placing the duck on the flat end of a spoon placed on the table and hitting the round end. George smiled and laughed and searched for the duck, although he did not make eye contact with the evaluator. George tried and had difficulty the first time, but after a second demonstration George was able to make the duck fly and seemed happy he made it happen. [Model Eval: Psych Evaluation 2;9- Autism Spectrum Disorder](#)

From the teacher interview we know:

- Sofie has weaknesses in vocabulary and doing grade level work for the high quality school she is in now.
- The teacher taught in a similar urban environment as Sofie spent her time until two years ago.
- The teacher believes Sofie is showing academic gaps and language differences, but not a disability.
 - Sofie is closing the gaps very quickly
 - Sofie knows strategies to close the gap

What can we learn from clinical interactions and observations with the student?

We are looking at what she knows and what she has learned.

Traditional Dynamic Assessment

Pretest

Mediated learning experience

Post-test

Dynamic Assessment Exercise (John McWhorter)
(Read out loud. Participants choose A or B for each item. 1/2)

DONE in AAE

Dynamic Assessment Exercise (John McWhorter)

(Read out loud. Participants choose A or B for each item. 2/2)

Pretest

1. a. I done ate one of the cucumbers in the frig.
b. I done have a crush on you since you was 12.

2. a. This morning I done drank orange juice with my breakfast.
b. You done growed up so fast.

3. a. The students done left the auditorium before the lecture finished.
b. The woman done drive her car after she got her driver's license.

Mediated Learning Experience

Dynamic Assessment Exercise (John McWhorter)

Post test.

Post test 1

1. a. I done ate one of the cucumbers in the frig.
b. I done have a crush on you since you was 12.
2. a. This morning I done drank orange juice with my breakfast.
b. You done growed up so fast.
3. a. The students done left the auditorium before the lecture finished.
b. The woman done drive her car after she got her driver's license.

Post-test 2

1. a. My little sister told me that she done walked to school with our big brother.
b. My mom done walked all the way around the house 2 days after surgery.
2. a. He done ate all the cupcakes we made for the party.
b. She always done gone food shopping on Fridays.

Contrary to expectations

Peña, E. & Quinn, R. (1997). Task familiarity: Effects on the test performance of Puerto Rican and African American children. *Language, Speech, and Hearing Services in Schools, 28* (Oct. 1997), 323-332.

Labeling tests, here the EOWPVT, did not distinguish the typically developing head start children from the children who actually had a language disorder. BUT, an assessment of the function of objects, a subtest of the Stanford-Binet made that distinction (Sentence Comprehension).



Patterson, J., Rodriguez, B., & Dale, P. (2020). Dynamic Assessment Language Tasks and the Prediction of Performance on Year-End Language Skills in Preschool Dual Language Learners *Am J Speech Lang Pathology*, 29(3):1226-1240

Pre-School Language Assessment Measures Pre-SLAM

Instructions:

- T1. Trial. **Fork + spoon** (trial, with clinician's "think aloud". Let me think. How are a fork and a spoon used the same way. Well a fork kind of stabs food and a spoon scoops food so they are different that way. But we use them both to help us eat, to get food in our mouths, to eat so we don't have to eat with our hands. So a fork and a spoon are used the same way because we use them to eat or we use them to get food in our mouths")

Similarity of Function. Pre-SLAM

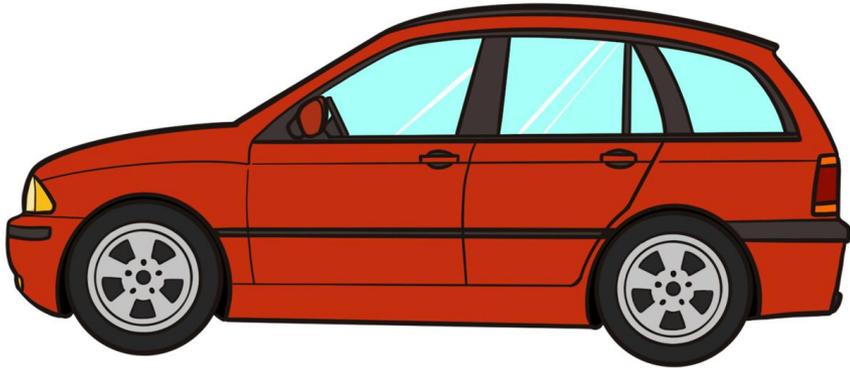
Continue with the following illustrations. “Can you tell me how these two things are used for the same thing or used in the same way?” (Give support when needed and note whether the amount of support the child/preschooler needs reduces as they learn what is expected of them.)



Glass



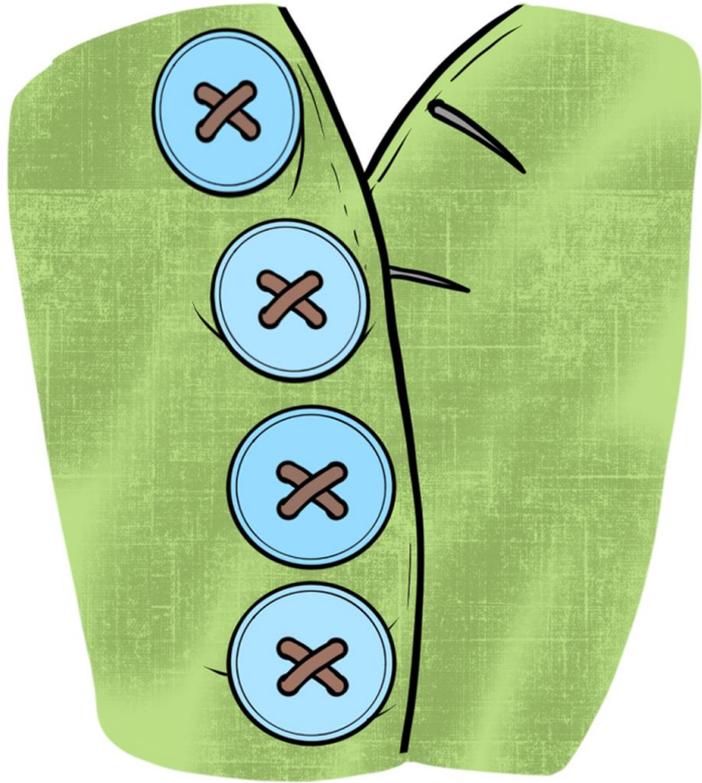
Cup



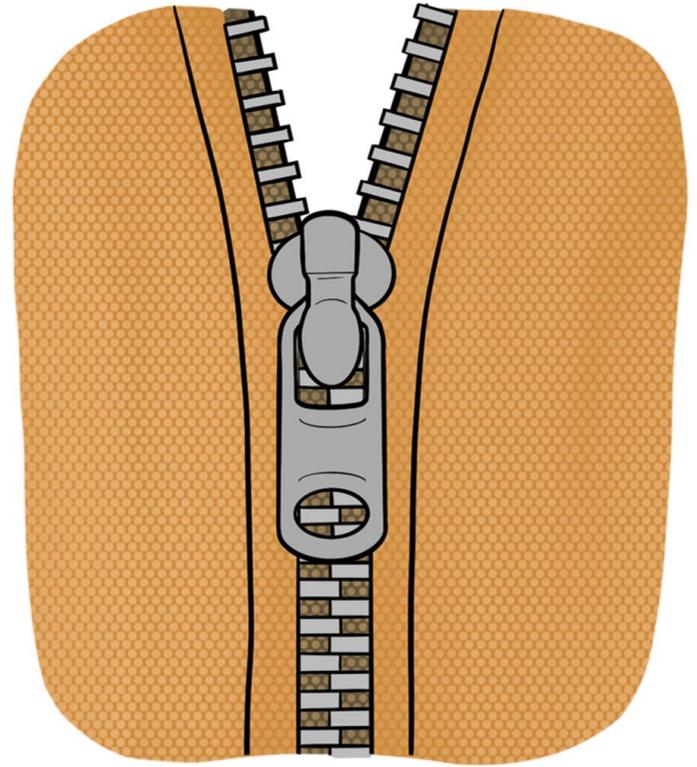
Car



Bicycle



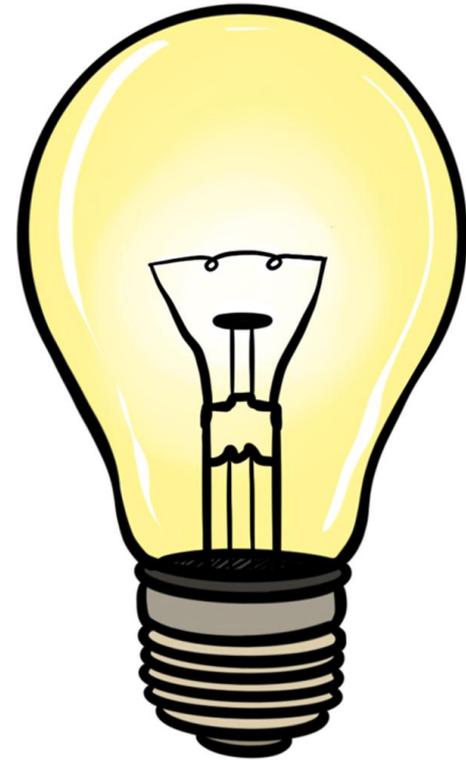
Button



Zipper

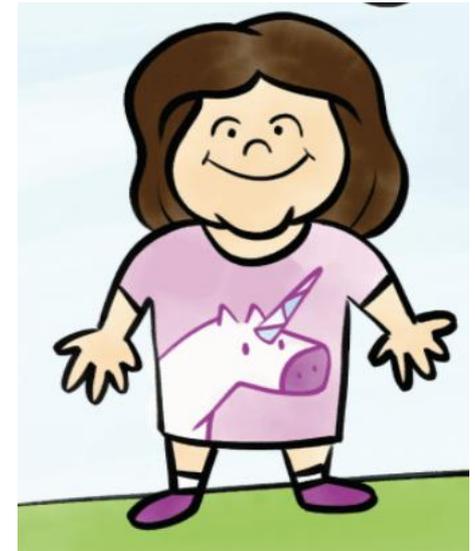


Candle



Light bulb

Walking-the-walk away from discriminatory evaluations towards accurate, culturally responsive, and ethical assessment practices.



The students referred to for an evaluation are almost always having trouble in the classroom. We as evaluators are to figure out why— to make that differential diagnosis:

Disorder, Difference, and/or Academic Gaps?



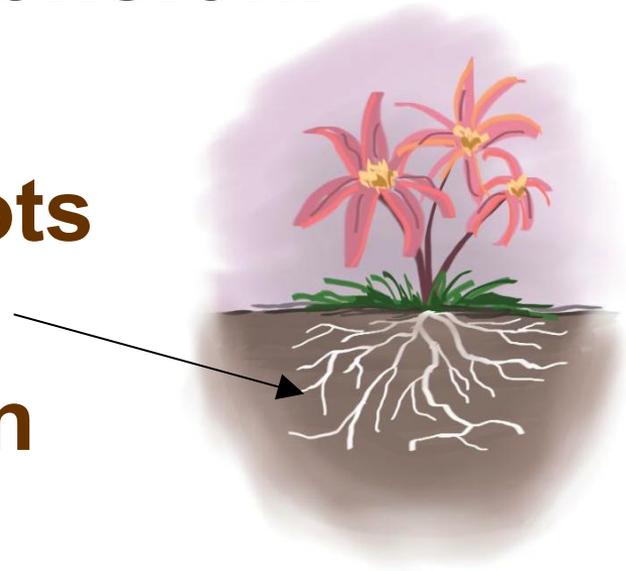
**Our job is to figure
this out!**



**“The student has problems
with reading
comprehension.”**

WHY?

**What are the roots
of this
comprehension
issue?**



“The student has reading comprehension problems.”

Is it a gap?

Weak academic language skills?

Lack of prior exposure?

Lack of adequate instruction?

English as a new language?

GAE as a new variety of English?

Is it a disability?

Is it something else?

Is it a combination?





**WHAT?
WHY?**

**Linguistic
Issues**

**Socio-
Linguistic
And Cultural
Differences**

Cognition

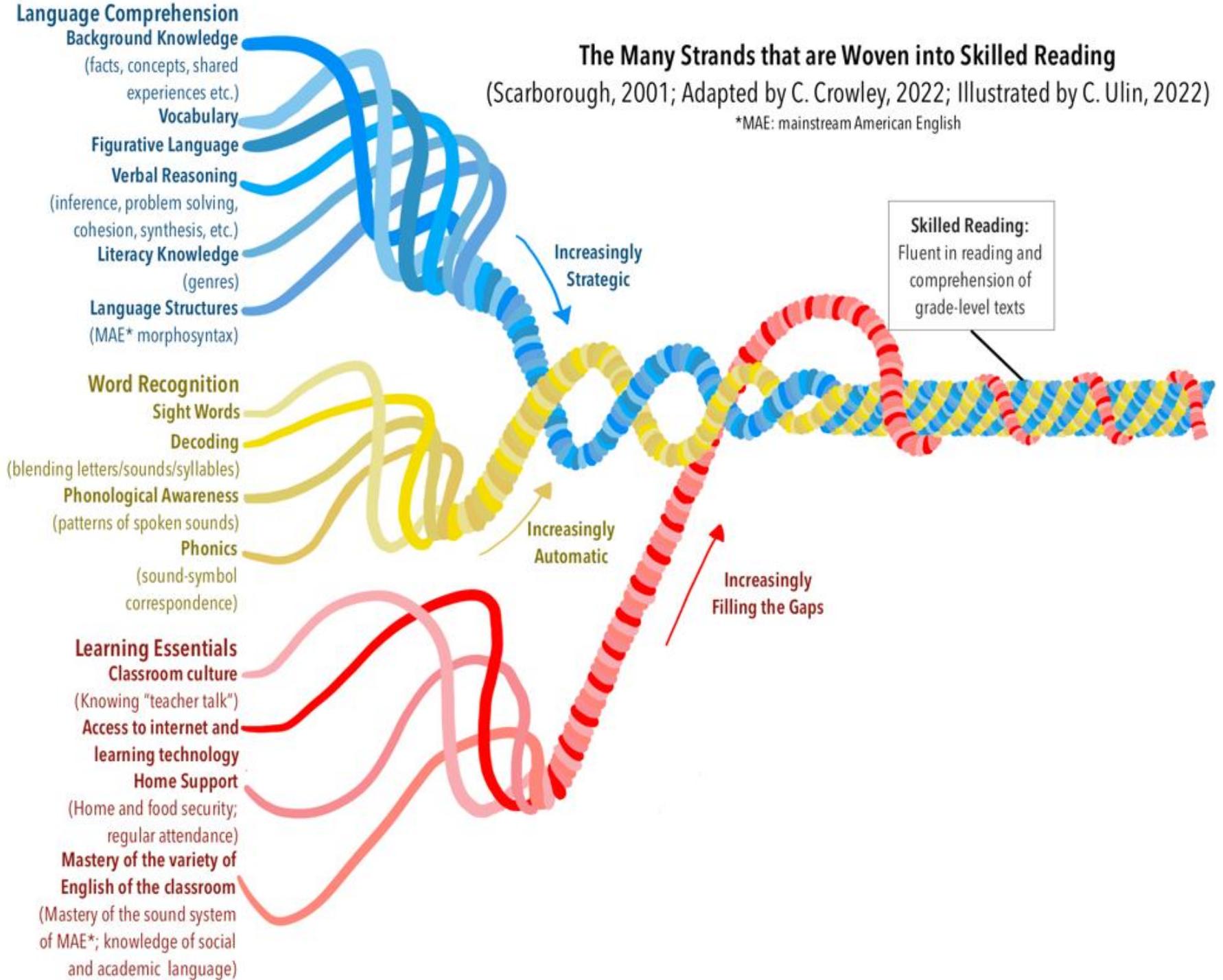
**Physical
Social-
emotional
Factors**

**Prior Knowledge
Factors**

The Many Strands that are Woven into Skilled Reading

(Scarborough, 2001; Adapted by C. Crowley, 2022; Illustrated by C. Ulin, 2022)

*MAE: mainstream American English



To make this differential diagnosis, we must gather information to learn about development, language acquisitional history, quality of academic instruction, parents' level of education (for SES, vocabulary, pre-literacy experiences), family history, comparison to peers, changes over time, etc.

**And then analyze that data using
our CLINICAL JUDGMENT!**

➤ Castilla-Earls, A., Bedore, L., Rojas, R., Fabiano-Smith, L., Pruitt-Lord, S., Restrepo, M.A., and Peña, E. (2020). Beyond scores: Using converging evidence to determine speech and language services eligibility for dual language learners. *American Journal of Speech-Language Pathology*, 29, 1116–1132. 2/3

How should we be doing evaluations?

Look at converging evidence:

Language samples

Nonword repetition

Dynamic assessment

Parent interview

Teacher interview

To ensure that we are using evaluation materials that are free of cultural and racial biases and that can distinguish English language learning from lack of adequate instruction in reading and math, we have to know

Who is this child/student?

**We find out through
the Critical Questions**

Dale (1996)

- The parent interview is an excellent diagnostic tool for children from middle class families.
 - What data support this?
 - What about children from other backgrounds?



Restrepo, M.A. (1998) *JSHR*, 41

Identifiers of Predominantly Spanish-Speaking Children with Language Impairment

- Ages 5 to 7 years.
- Predominantly Spanish speaking (essentially monolingual Spanish speakers).
- All children from Mexican American backgrounds.
- All but 2 of the children were low income as judged by eligibility in free lunch program.

The “Gold Standard” for Identification of SSLI children, p. 1401-1402

- No test for reference standard to identify SSLI.
- SSLI children had moderate to severe language delays and were receiving language therapy by ASHA-certified bilingual SLP or bilingual aide with at least 3 years experience.
- Clinical judgment is reliable for both identification of clinical population and the severity of a disorder.
- Teacher perception also identified children at risk for language or learning disabilities.
- Children were identified by both clinical and teacher judgments.



Restrepo findings

- 4 measures discriminated the groups of children with a sensitivity of 91.3% and a specificity of 100%. These were:
 - **Parental report of the child's speech and language skills (accurate report of child's current language skills);**
 - **Number of errors per T-unit;**
 - **Mean length per T-unit; and**
 - **Family history of speech and language problems (relates to biological basis of LI.**

Restrepo, 1998

- “In summary, parent interviewing and language sampling procedures, as used in this study, currently appear to be the best clinician’s tools for identification of SSLI children.” p. 1406-1407

The Primary Caregiver Interview

- A student's primary caregivers have the *critical* information their child's:
 - communication skills across communicative contexts and partners
 - cultural background
 - exposure to various dialects and languages
 - experience with literacy and play
- Every primary caregiver should be asked nine critical questions . . .

Critical Question #1

What exposure has your child had to different languages or dialects?

–a child's language may be evidence of a language disorder or . . .

- 2nd lang. acquisition (incl. silent period?)
- subtractive bilingualism
- correct dialect forms
- code-switching
- language transfer, etc.



Real Life Example

2 yr 10 mth old Mexican boy 1/4

- **Language Background and Use:**
- Only Spanish is spoken at home. J did not respond to English. He and his mother are monolingual/Spanish speakers, and they speak the standard Mexican dialect of Spanish.

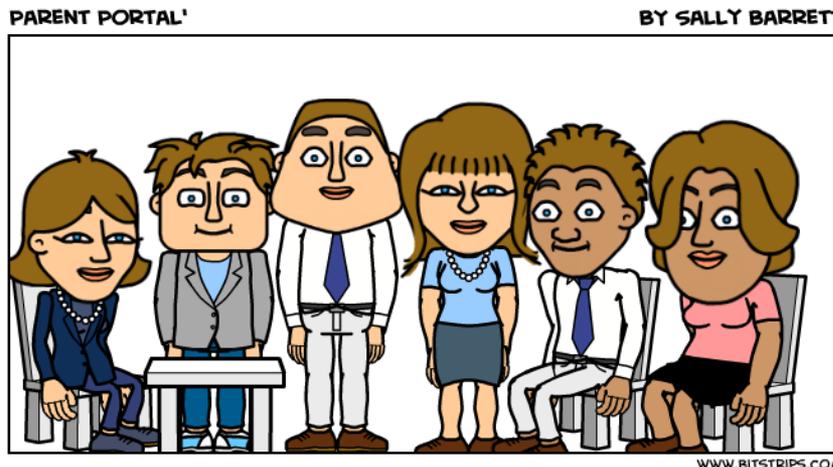
Real Life Example

JT is a 5 year, 6 month old sequential bilingual Mandarin-English-speaking female who has been raised in a monolingual Mandarin household. She has had significant exposure to English through her older brother (10) and is currently acquiring English in her monolingual-English kindergarten. JT is considered a sequential bilingual because she began acquire English after age three (Genesee et al., 2004). By Sishi Huang & Elaine Fong



Critical Question #2

- What is the highest educational level of the mother or primary caregiver?
 - Research shows that a child's vocabulary and literacy achievement is positively correlated with her or his mother's educational level.



Critical Question #3

- **Have there been any significant changes in the family structure recently?**
- the child's performance during the evaluation may be affected by factors outside of the evaluator's (and the child's) control.
 - birth of a sibling
 - death in the family
 - serious illness
 - divorce



Real Life Example

2 yr 10 mth old Mexican boy 2/4

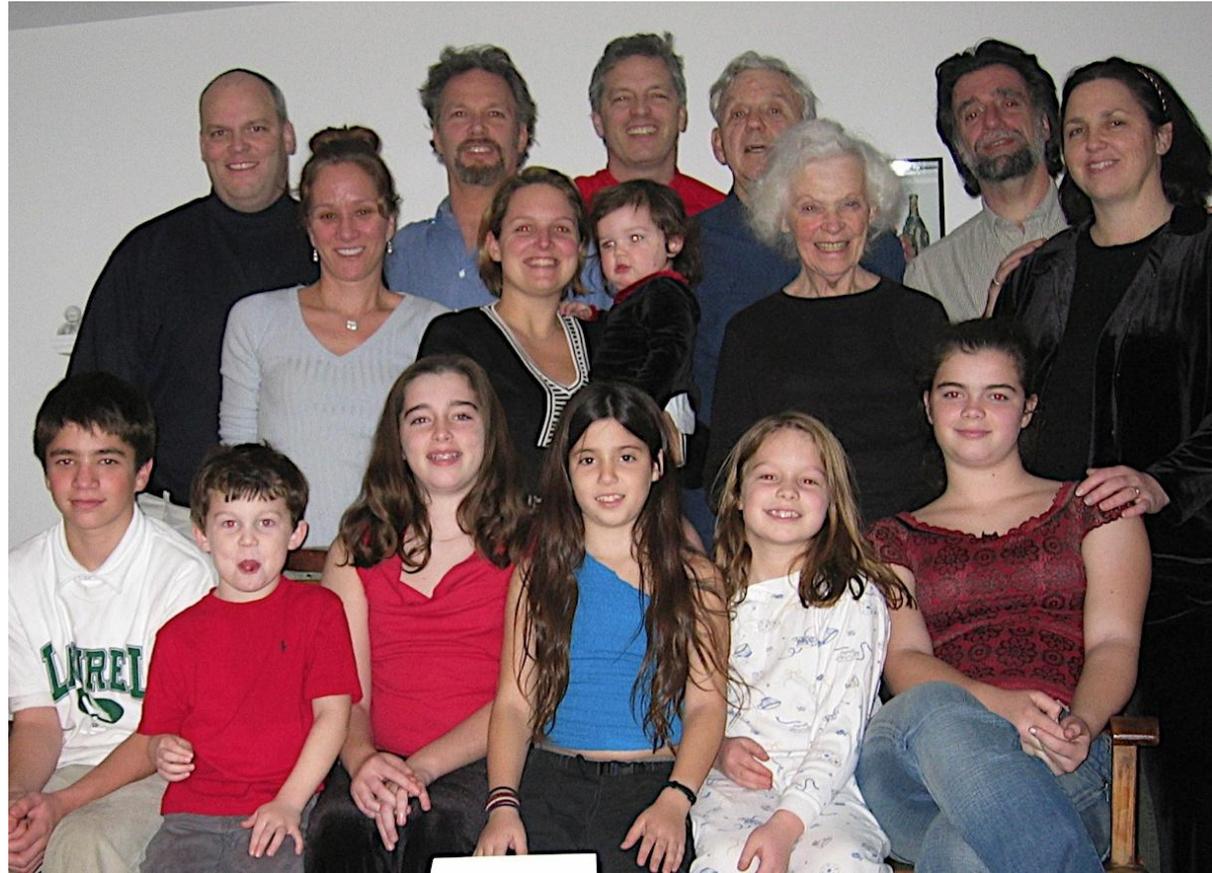
- **Background:** J lives with his mother and 14 month old sister. His parents are separated, but his father visits approximately two times a week. His mother completed sixth grade and his father graduated from high school in Mexico. Both parents are from Mexico and emigrated from Mexico two years ago.



Critical Question #4

- Is there a family history of speech, language, and/or academic problems?
(Restrepo, 1998)

A genetic basis exists for many communication disorders.



Real Life Example

2 yr 10 mth old Mexican boy 3/4

Family Background:

- According to the mother, her sister did not talk or walk until she was six years old. No one in her family knew why. Other than this sister, the mother knows of no additional concerns with speech-language or academic problems in either the mother's or father's family.



Foster father who has seen many children of the same age

His foster father agreed that Henry's language is now age-appropriate compared to other 3;5 year olds and to his own eight year old son when he was Henry's age. The father also noted that when Henry came to their home, he spoke less than he does now. In the six weeks that he has been with this family, Henry has begun talking a great deal.



Critical Question #5

- **How does how the child's speech and language development compare to his/her siblings at the same age or to peers in the child's speech community? (Restrepo, 1998)**



Real Life Example

2 yr 10 mth old Mexican boy 4/4

- **Receptive Language**: The mother reported that J plays with other Spanish-speaking children his age and appears to understand what they are saying without difficulties.
- **Expressive language**: His mother reports that while she can understand J, at least most of what J says, many of her friends and relatives have a hard time understanding him.



Critical Question #6

- **Was the child's performance during the evaluation representative of how he usually acts?**

–A child may not want to “perform” for a stranger seated at a tiny table in a small room with boring spiral-bound manuals full of pictures of watches and rubber ducks.



Critical Question #7

- **Is your child clumsy?**

–Based on Dr. Lisa Goffman's work. Children with SLI are clumsy. Not enough to qualify for OT or PT, but on the low end of normal and noticeable.



Critical question #8

**Ask caregiver to bring
in 10 examples of
student's best communications and
where it breaks down between the
time you schedule the evaluation
and you see the student.**



More useful information

“Critical Question #9”

- **What does your child do that makes you know (s)he is smart? Describe your child’s strengths and weaknesses. What progress or regression has happened over the past 6 months?**



More important information

- **Developmental milestones**
- **Significant medical history**
- **Parent concerns**
- **Prior SPED services**
- **Prior education**
- **Hearing status (DO NOT ASSUME NORMAL HEARING, “because X responded to environmental and speech sounds”)**

You can download the Critical
Questions and Teacher
Interview at leadersproject.org
Dropdown menu

Disability Evaluations

Fast Word Mapping

- Horton-Ikard, R., & Ellis Weismer, S. (2007). A preliminary examination of vocabulary and word learning in African American toddlers from middle and low socioeconomic status homes. *American Journal of Speech-Language Pathology*, 16(4), 381–392.
- Also Kapantzoglou, M. Restrepo, M.A, & Thompson, R. (2012). Dynamic assessment of word learning skills: Identifying language impairment in bilingual children.

Word Learning in African American Toddlers from Middle and Low SES homes (Horton-Ikard & Weismer, 2007. *AJSLP*, 16(4))

How do we assess children's semantic knowledge?

1. Norm-referenced-standardized vocabulary tests (measures existing vocabulary knowledge);
2. Lexical diversity measures extracted from oral language samples (experience-dependent);
and
3. Word-learning tasks such as fast mapping.

Current research on performance of AA children on norm-referenced standardized vocabulary tests

- PPVT-III (receptive vocabulary test) shows SES differences depending on caregiver's level of education.
- EVT scores of AA and White preschoolers were significantly influenced by variables related to SS such as mother's education, income, marital status, and number of children in family.

SES is likely to play a differential role in performance of AA children on standardized vocabulary tests

Lexical diversity measures extracted from oral language samples

- **Type token ratio (TTR)**. Ratio of number of different words divided by the total number of words. Criticized as insensitive to changes or differences in chronological age. Also, Utterance length may affect number of word types and tokens used.
- **Number of Different Words (NDW)**. Differentiates preschoolers with language impairment from TD peers. Also more sensitive to developmental changes.
- Hart & Risley and Dollaghan found that SES is a factor of performance on vocabulary tests regardless of race.

Word-learning tasks such as fast mapping: “Quick incidental learning”

Novel word-learning tasks, including fast mapping, can help identify early lexical skills.

Children can rapidly increase their vocabulary knowledge through mapping conceptual information received from everyday experiences to numerous linguistic forms.





Fast mapping task testing procedures for 2007 study

Conclusion: No significant differences in SES group differences were observed in ability of AA toddlers (30 to 40 mths) to learn novel word meanings on a fast mapping task.

The same toddlers performed significantly poorer on standardized expressive and receptive vocabulary tests and on NDW used in spontaneous speech.

➤ Castilla-Earls, A., Bedore, L., Rojas, R., Fabiano-Smith, L., Pruitt-Lord, S., Restrepo, M.A., and Peña, E. (2020). Beyond scores: Using converging evidence to determine speech and language services eligibility for dual language learners. *American Journal of Speech-Language Pathology*, 29, 1116–1132. 3/3

How should we be doing evaluations?

Look at converging evidence:

Language samples

Nonword repetition

Dynamic assessment

Parent interview

Teacher interview

Nonword repetition tasks

How we see how students learn new information

(Schwob, et al, 2021; Ortiz, 2021; Guiberson, 2013;
Dollaghan & Campbell, 1998; Ebert, et al., 2008)

Dollaghan, C., & Campbell, T. F. (1998). Nonword Repetition and Child Language

Impairment. *Journal of Speech, Language & Hearing Research*, 41(5), 1136.

<u>One Syllable</u>	<u>Two Syllables</u>	<u>Three Syllables</u>	<u>Four Syllables</u>
(nigh + b) Naib	(day) (Bach) Tay vock	Chee(k) boy (cow + b) Chee noy taub	day tah chai boy-p Vay tah chai doyp
(rope) Voup	(Cho(ck)) (bag) Cho vag	(nigh) (toe) (babe) Nai cho veib	Da(d) low boy Chee(k) + g Da vo noy cheeg
(gouge) Touge	(ca(t)) (type) Va chi pe	(boy) (cow) (cab) Doy tau vab	Nigh boy cow tube Nai choy tau vube
(d/boy + f) Doif	(noi(se) (cow +f) Noi towf	(day) (boy) (chai + g) Tae voy chaig	Ta(p) vah chee(k) (nigh + g) Ta vah chee naig

Dollaghan, C., & Campbell, T. F. (1998). Nonword Repetition and Child Language Impairment. *Journal of Speech, Language & Hearing, Research*, 41(5), 1136.

1. Present with consistent rate, accuracy, and intonation.
2. Used early developing phonemes
3. Presented under headphones.
4. Present each nonword only once, [by audiotape].
5. [Audiotape] directions: “Now I will say some made up words. Say them exactly the way that I say them.”

Scoring

- Each phoneme, consonant, or vowel, was scored as correct or incorrect.
- Scored by dividing the number of phonemes repeated correctly by the total number of possible phonemes at each nonword length. 1PPC, 2PPC, 3PPC, 4PPC, TotalPPC. Phoneme substitutions and omissions counted as incorrect. Phoneme distortions counted as correct.

- Two groups of 20 ages 6:0 to 9:9, with a mean age of 7:10.
- Reference standard for LI group—diagnosed by an ASHA-certified SLP and in language therapy. Why? No gold standard.
- A substantial percent of the subjects were African American and a majority were from lower income families.

What do nonword repetition tasks assess?

How would difficulty in this area affect a student's performance in school and/or language development?

English nonword repetition

Dollaghan & Campbell Also think about Learning Strategies
Checklist

- Jessica 4;10 Head start. 10:10
- Paco. 4:7. head start

Must distinguish ASD, or another disorder,
from a problem with nonword repetition

Head start

- Kofi ASD Nonword English blurred

Spanish Non-Word Repetition Task

Instructions

"Voy a decir unas palabras inventadas. No son palabras de verdad y suenan chistosas. Despues de que yo diga una palabra, quiero que tu la repites."

1 Syllable	2 Syllables	3 Syllables	4 Syllables	5 Syllables
/du/	/ná ge/	/te bá ka/	/tʃi no té ba/	/be te tʃo dú pe/
---	-----	-----	-----	-----
/gi/	/bó pa/	/tʃo bi ga/	/no tʃi bé ni/	/do bi nu tʃi ga/
---	-----	-----	-----	-----
/pe/	/tú njo/	/be tʃi po/	/di tu já bu/	/ni tʃu to ná be/
---	-----	-----	-----	-----
/bo/	/dé fu/	/nu ti fe/	/te do tʃi go/	/te be tʃi nó ge/
---	-----	-----	-----	-----

Ebert, K. D., Kalanek, J., Cordero, K.N., Kohnert, K. (2008). Spanish nonword repetition: Stimuli development and preliminary results. *Communication Disorders Quarterly*, 29, 2, 67-74. <https://doi.org/10.1177/1525740108314861>

Name: _____ Date: _____

SPANISH NONWORD REPETITION TASK
(**ADAPTATION** of scoring and procedures from Dollaghan
& Campbell, JSLHR, 1998. Kohnert 02)

Administration:

1. Present under headphones at comfortable listening level in quiet location.
2. Subjects hear each word only one time.
3. Audio-taped instructions will read: “Now I will say some made-up words. Say them after me exactly the way that I say them.”
4. Responses are recorded and transcribed using broad phonetic transcription (do not transcribe on-line).

Scoring:

1. Each phoneme (consonant or vowel) to be scored as correct or incorrect in relation to target phoneme.
2. Phoneme SUBSTITUTIONS and OMISSIONS = INCORRECT.
3. Distortions of a phoneme = Correct.
4. *Phoneme Additions* are NOT counted as errors.
5. Where syllable structure is not recreated correctly (i.e., addition or omission one or more syllables) individual phoneme scoring proceeds after aligning syllable sequence produced by subject as nearly as possible to target, using vowels repeated as syllable anchors.
6. Non-words are transcribed for scoring on the next sheet.

Scoring (cont.) :

7. Number of phonemes repeated correctly to be divided by total number of phoneme targets (PPC = Percentage of Phonemes Correct) at each non-word length (1PPC, 2PPC, 3PPC, 4PPC, 5PPC) and for entire set (TOTPPC).

1 PPC (# correct / **8**) = _____

2 PPC (# correct / **16**) = _____

3 PPC (# correct / **24**) = _____

4 PPC (# correct / **32**) = _____

5 PPC (# correct / **40**) = _____

TOTPPC (# correct / **120**) = _____

Crosslinguistic Nonword Repetition Task.

Chiat and Polišenská (2016). Chiat, S., & Polišenská, K. (2016). A Framework for Crosslinguistic Nonword Repetition Tests: Effects of Bilingualism and Socioeconomic Status on Children's Performance. *Journal of Speech, Language, and Hearing Research*, 59 (5), 1179-1189. https://doi.org/10.1044/2016_JSLHR-L-15-0293.
Crosslinguistic with modifications e.g. /g/ for Dutch

Mandarin nonwords in process

	2 音节 <u>g u m ai</u>	3 音节 <u>d e b a q i an</u>	4 音节 <u>p eng k ui r ou y u</u>	5 音节 <u>z ou p ei t u an j iu b en</u>
Character 字	姑麦 <u>gū mài</u>	德八欠 <u>dé bā qiàn</u>	碰魁柔雨 <u>pèng kuí róu yǔ</u>	凑配团纠本 <u>zòu pèi tuán jiū běn</u>
Pinyin 拼音	gu1 mai4	de2 ba1 qian4	peng4 kui4 rou2 yu3	zou4 pei4 tuan2 jiu1 ben3
Phonemes 音素	g u m ai	d e b a q i an	p eng k ui r ou y u	z ou p ei t u an j iu b en
Tones 声调	1__ 4__	2__ 1__ 4__	4__ 4__ 2__ 3__	4__ 4__ 2__ 1__ 3__
Character 字	秀最 <u>xiù zuì</u>	码花吧 <u>mǎ huā bā</u>	资偷贴七 <u>zī tōu tiē qī</u>	苏匪家新估 <u>sū fēi jiā xīn gū</u>
Pinyin 拼音	xiu4 zui4	ma3 hua1 ba1	zi1 tou1 tie1 qi1	su1 za1 jia1 xin1 gu1
Phonemes 音素	x iu z ui	m a h u a b a	z i t ou t ie q i	s u z a j ia x in g u
Tones 声调	4__ 4__	3__ 1__ 1__	1__ 1__ 1__ 1__	1__ 1__ 1__ 1__ 1__
Character 字	裹戏 <u>guǒ xì</u>	月翁部 <u>yuè wēng bù</u>	聊岁继糖 <u>liáo suì jì táng</u>	全龄甘蛇冰 <u>quán líng gān shé bīng</u>
Pinyin 拼音	guo3 xi4	yue4 weng1 bu4	liao2 sui4 ji4 tang2	quan2 ling2 gan1 she2 bing1
Phonemes 音素	g uo x i	y ue <u>w</u> e ng b u	l i ao s ui j i t a ng	<u>ch</u> u an l i ng <u>g</u> a n <u>sh</u> e b i ng
Tones 声调	3__ 4__	4__ 1__ 4__	2__ 4__ 4__ 2__	2__ 2__ 1__ 2__ 1__

Nonword Repetition Tasks

Phonological Awareness with Dynamic Assessment

Nonword

- **Martha** Language loss in Spanish acquiring English
- **Andy Mack.** English dominant (Start at 1:45, English)

Dynamic assessment phonological

- **Andy Mack.** English dominant Spanish bilingual
- **Martha.** Language loss in Spanish acquiring English

Challenges with dynamic assessment

If the task is too hard, it will be too hard for both the typically developing students and the students with language disorders.(specificity)

If it is too easy, the students with language disorders will also pass and so it won't separate the typically developing from the language disordered. (sensitivity)

How to address this challenge?

The Bottom Line to Address Disproportionality:

“Evaluators must adopt an approach that works to distinguish a disorder from *‘something else’*, such as an academic gap, SES, prior experience, dialect, second language acquisition, etc.”

Indicators of a Comprehensive Evaluation

- Evaluators must use their clinical judgment, informed by the law and evidence-based practice to distinguish a disorder from “something else”.
- Evaluators must assess the student’s ability to learn through dynamic assessment.
- Evaluators must write holograms so the student “comes to life” for the reader.
- Evaluations must contain data--specific quotes of the student’s relevant speech/language and cognitive/problem-solving skills-- so a reader can see the basis for the evaluator’s conclusions.

Each evaluation should have a
similar framework

BUT

Every evaluation is different based on the
student's experiences and background.



PreSLAM

Meaningful predictions Uganda

For Your Extension Activity / Groups

1. Ask the Critical Questions of a parent/caregiver and write up the “Background” section and the “Language Background and Use” section based on what you learned. (1 paragraph each)
2. Ask the Teacher Interview questions for one of your students. In one paragraph, write up what you learned that is important to include in an evaluation.
3. Give NWRTs to at least 10 students of about the same age. If you practice beforehand, it takes 2 minutes or less to give. What did you learn about the students? If you could get students with no language or sound system issues, how did they compare? Write up what happened for 1 or 2 students.

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