LEADERSPROJECT
TEACHERS COLLEGE • COLUMBIA UNIVERSITY

Dynamic Assessment: How does it work in the real world?

Michigan Speech, Language and Hearing Asso.
March 13, 2025

Catherine J. Crowley, J.D., Ph.D., CCC-SLP
Teachers College Columbia University
crowley@tc.columbia.edu

1

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 & Polišenská, 2016; Hart & Risley, 1985; Fernald, et al, 2013.)

2

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.

3

Standardized Assessments and EBP

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.

4

Nonword repetition tasks

and

Dynamic Assessment

We can see how students learn new information

5

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

A "Dynamic" Approach looks at whether the student can acquire new skills.

6

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."

7

Traditional Dynamic Assessment

Pretest
Mediated learning experience
Post-test

8

Dynamic Assessment for Narrative Skills

Petersen DB, Konishi-Therkildsen A, Clark KD, DeRobles AK, Frahm AE, Jones K, Lettich C, Spencer TD. Accurately Identifying Language Disorder in School-Age Children Using Dynamic Assessment of Narrative Language. J Speech Lang Hear Res. 2024 Dec 9;67(12):4765-4782. doi: 10.1044/2024_JSLHR-23-00594.

634 diverse first- through fifth-graders with and without language disorder.

Reference standard for sensitivity included if met 2 of 3 criteria: 1) Student had IEP and qualified to receive language services under s-l impaired category. (If student was multilinguals, determination of eligibility was made in consultation with a multilingual SLP); 2) Repeated 70% of less accurate syllables on Dollaghan & Campbell nonword repetition test; 3) student received a score of 1.25 SD below the mean on a narrative retell language sample in English. (Spanish and English samples were elicited for bilingual students)

Reference standard for specificity: Any student who did not meet the sensitivity reference standard. Petersen, et al, 2024. p. 4769. (not 2 of 3)

9

Dynamic Assessment for Narrative Skills

Petersen DB, Konishi-Therkildsen A, Clark KD, DeRobles AK, Frehm AE, Jones K, Lettich C, Spencer TD. Accurately Identifying Language Disorder in School-Age Children Using Dynamic Assessment of Narrative Language. J Speech Lang Hear Res. 2024 Dec 9;67(12):4765-4782.

First researchers read a story and then had the student retell the story. When students retold the story, they were scored on presence and clarity of story grammar elements, sentence structures, and vocabulary complexity. In this study the researchers used the NLM Listening subtest procedures of the CUBED-3 (Petersen & Spencer, 2023).

Examiners recorded the inclusions of multiple story grammar elements, scored on a scale of 0-2; calculated the frequency of adverbial subordinating conjunctions such as because, when, and after and relative pronouns such as that, who and which; and tracked the production of less frequently used, complex vocabulary words (Tier 2 words). Total of 35 possible points.

Those who scored -1.25 SD or lower from the mean were identified as meeting one of the three criterial for the reference standard for language disorder. Researchers used the composite score from this language sample to represent a student's current English narrative language retelling ability.

10

Dynamic Assessment for Narrative Skills

Petersen DB, Konishi-Therkildsen A, Clark KD, DeRobles AK, Frehm AE, Jones K, Lettich C, Spencer TD. Accurately Identifying Language Disorder in School-Age Children Using Dynamic Assessment of Narrative Language. J Speech Lang Hear Res. 2024 Dec 9;67(12):4765-4782.

Teaching phase 1 of dynamic assessment. Shown a series of 8 simple pictures arranged in two rows in a panel format with 13 colorful icons below each story that represented major story grammar elements. Character, setting, problem, feeling, plan, attempt, consequence, feeling-2, plan-2, attempt-2, consequence-2, ending, and ending feeling.

The examiner explained to the student that they were going to tell them a story and that they should listen carefully because they were going to be asked to retell the exact same story. The student was assured that the examiner would help them if necessary. As the examiner read the story, they pointed to and named the 13 story grammar icons while reading.

The story included 3 less common highly specific words describing character's emotions in the story (e.g. distraught), several other complex vocabulary words (e.g., particular) Story also included multiple adverbial and relative subordinate clauses.

11

Dynamic Assessment for Narrative Skills

Petersen DB, Konishi-Therkildsen A, Clark KD, DeRobles AK, Frehm AE, Jones K, Lettich C, Spencer TD. Accurately Identifying Language Disorder in School-Age Children Using Dynamic Assessment of Narrative Language. J Speech Lang Hear Res. 2024 Dec 9;67(12):4765-4782.

The student was then asked to retell the story with the pictures and icons present. Examiner recorded the number of story grammar elements that the student could retell independently and helped the student retell any parts of the story that were omitted or lacked detail. Any time a student omitted part of the story, examiner asked an open-ended question (e.g., what was the problem?) and if the student responded with a complete clear response, student was asked to go back one step in the story (e.g., to the setting) and was told to remember to include the problem in their story. If the student didn't respond to the open-ended question with a complete and clear answer, the examiner modeled for the student what to say (a Level 2 prompt), then had the student repeat the sentence and then asked the student to go back one step in the story and to continue the story, remembering to include the story grammar element that was previously omitted.

12

Dynamic Assessment for Narrative Skills

Petersen DB, Konishi-Therkildsen A, Clark KD, DeRobles AK, Frahm AE, Jones K, Lettich C, Spencer TD. Accurately Identifying Language Disorder in School-Age Children Using Dynamic Assessment of Narrative Language. J Speech Lang Hear Res. 2024 Dec 9;67(12):4765-4782.

The total number of complete and clear story grammar elements the student produced independently was recorded as the Teaching Phase 1 score, and the number and type of prompts required to help the student were noted to document the extent to which the student required assistance during the first teaching phase.

Teaching Phase 1 was considered to be a proximal posttest measure and was included as a dynamic assessment variable.

13

Dynamic Assessment for Narrative Skills

Petersen DB, Konishi-Therkildsen A, Clark KD, DeRobles AK, Frahm AE, Jones K, Lettich C, Spencer TD. Accurately Identifying Language Disorder in School-Age Children Using Dynamic Assessment of Narrative Language. J Speech Lang Hear Res. 2024 Dec 9;67(12):4765-4782.

Teaching Phase 2. During the second teaching phase, the pictures were removed, and the student was asked to retell the story again using just the icons. Again, the examiners followed explicit teaching procedures to support each student in their inclusion of all story grammar elements. When a student omitted story grammar elements or incorrectly retold a part of the story, the examiner immediately stopped them and used a Level 1 and/or a Level 2 prompt.

After a successful production of the story part (with either level of prompt), the examiner used the same overcorrection procedure employed in the first teaching phase, where the student was asked to go back one story grammar element from where the error occurred and resume retelling the story from that element forward. Examiners made sure that the student included the previously omitted element (e.g., “Start telling the story again at the problem. Remember to tell me about what the character was feeling.”).

14

Dynamic Assessment for Narrative Skills

Petersen DB, Konishi-Therkildsen A, Clark KD, DeRobles AK, Frahm AE, Jones K, Lettich C, Spencer TD. Accurately Identifying Language Disorder in School-Age Children Using Dynamic Assessment of Narrative Language. J Speech Lang Hear Res. 2024 Dec 9;67(12):4765-4782.

Modifiability rating. Immediately after the teaching phase, the examiner rated the student’s modifiability (i.e., language learning potential) and reflected on how difficult it was for the student to learn and how much effort it took to teach the student (Peña et al., 2006). The modifiability rating form required the examiner to reflect on the student’s behavior during the teaching phases, assigning a score ranging from 0 to 4 on a student’s (a) attention and memory, (b) response to prompts, (c) degree of transfer, and (d) confidence and frustration, with 0 indicating poor performance and 4 indicating good performance.

Authors referred to these ratings as the Behavior Scales.

15

Dynamic Assessment for Narrative Skills

Petersen DB, Konishi-Therkildsen A, Clark KD, DeRobles AK, Frahm AE, Jones K, Lettich C, Spencer TD. Accurately Identifying Language Disorder in School-Age Children Using Dynamic Assessment of Narrative Language. J Speech Lang Hear Res. 2024 Dec 9;67(12):4765-4782.

The examiner was also required to rate the student's ability to learn language, considering a student's ability to learn and retell story grammar elements, produce more complex sentences, and increase their use of less commonly used, highly specific vocabulary words.

We referred to this final rating as the Learning score, which was composed of nine half-point intervals ranging from 0 (indicating considerable difficulty) to 4 (indicating considerable ease). Scored the modifiability rating scales immediately after.

We used the sum of the four Behavior Scales (0–16) and the Learning score (0–4) as dynamic assessment modifiability variables in this study.

16

Dynamic Assessment for Narrative Skills

Petersen DB, Konishi-Therkildsen A, Clark KD, DeRobles AK, Frahm AE, Jones K, Lettich C, Spencer TD. Accurately Identifying Language Disorder in School-Age Children Using Dynamic Assessment of Narrative Language. J Speech Lang Hear Res. 2024 Dec 9;67(12):4765-4782.

Posttest. The distal posttest used a different story than what was taught during the teaching phases and did not include any accompanying pictures or icons. The posttest model story did include the same narrative structure and sentence complexity as the story that was used in the teaching phases. The posttest had a maximum score of 35 points. The administration and scoring for this posttest were similar to the procedures used for the language sample.

17

Dynamic Assessment for Narrative Skills

Petersen DB, Konishi-Therkildsen A, Clark KD, DeRobles AK, Frahm AE, Jones K, Lettich C, Spencer TD. Accurately Identifying Language Disorder in School-Age Children Using Dynamic Assessment of Narrative Language. J Speech Lang Hear Res. 2024 Dec 9;67(12):4765-4782.

The results of this study indicate that dynamic assessment is a promising alternative to traditional norm-referenced tests and can be used with CLD children, yielding excellent sensitivity and specificity.

This is consistent with previous research that suggests that dynamic assessment has superior classification accuracy over most traditional norm-referenced tests, particularly when administered to culturally and linguistically diverse students for whom differentiation between difference and disorder can be difficult.

Thus, the results of this study indicate that the dynamic assessment may be a valid tool for proper identification of language disorder across all populations.

18

Lam, J. H. Y., Resendiz, M. D., Bedore, L. M., Gillam, R. B., & Peña, E. D. (2024). Validation of the Mediated Learning Observation Instrument among children with and without Developmental Language Disorder in dynamic assessment. *Journal of Speech Language and Hearing Research*, *67*(7), 2159–2171.

Mediated Learning Observation–Revised

Cognitive factor

	5	4	3	2	1
Problem-solving	Systematic and efficient, used forethought, reflection	Organized, but somewhat inefficient (less than 25% off task)	Sketchy plan, trial and error	Disorganized, haphazard plan	No plan; unsystematic guessing
Flexibility	Uses multiple strategies readily	Has preferred strategies, but can change when necessary	Some evidence of more than one strategy and occasionally utilizes them	Recognizes limitations of strategy, but cannot see alternatives	Persists with one strategy, regardless of outcome
Task orientation	Completely understands tasks	Mostly understands tasks (75%)	Understands tasks some of the time (50%)	Often does not understand tasks (25% of the time)	Doesn't understand tasks
Meta-cognition	Aware of all errors	Aware of most errors (75%)	Aware of some errors (50%)	Unaware of most errors (25%)	Unaware of any errors
Nonverbal self-reward	Positive response to task regardless of difficulty	Positive response related to task difficulty	Demonstrates insecurity, positive and negative responses related to difficulty	Negative response related to task difficulty	Negative response regardless of task difficulty
Comments					

19

Lam, J. H. Y., Resendiz, M. D., Bedore, L. M., Gillam, R. B., & Peña, E. D. (2024). Validation of the Mediated Learning Observation Instrument among children with and without Developmental Language Disorder in dynamic assessment. *Journal of Speech Language and Hearing Research*, *67*(7), 2159–2171. https://doi.org/10.1044/2024_jslhr-23-00127

Learning engagement

	5	4	3	2	1
Motivation	Enthusiastic, engages in tasks readily	Curious, shows interest	Ambivalent, unsure about tasks	Guarded, seems fearful of tasks	Avoidant, does not want to engage
Responsiveness to feedback	Very positive, maintains enthusiasm	Positive, but hesitant; requires some feedback	No response to feedback	Negative, disheartened; requires much feedback	Very negative, rejects feedback
Verbal mediation	Elaborates plan clearly	Talks through problem	Talks occasionally	1–2 word utterances only	No verbal mediation
Comments					

Language anticipation

	5	4	3	2	1
Anxiety	Calm, little to no soothing required	Fidgety, but can be soothed	Uncomfortable, breaks needed to sooth	Distressed, much soothing required	Distraught, crying, cannot be soothed
Attention	Attentive and focused	Focused, but distractible at times	Distractible, but can be refocused, needs prompting	Distracted, and difficult to refocus	Distracted and off task
Compliance	Cooperative	Insecure	Hesitant	Uncooperative	Refusing
Comments					

20

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.

21

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.

22

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

23

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.

24

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.

25

Fast mapping task testing procedures for 2007 study

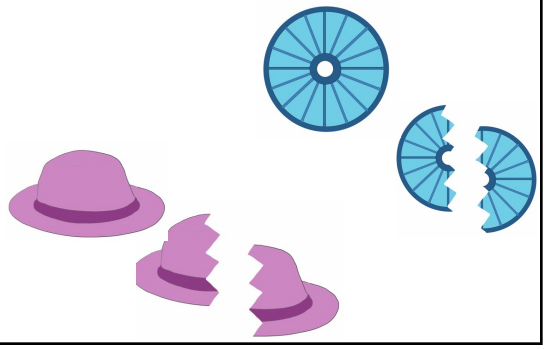
Conclusion: No significant differences in SES group differences were observed in ability of AA toddlers (30 to 40 mths) to learn novel word meanings on a fast mapping task.

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

26

DA: Novel Morpheme Ku

What might be an issue with this dynamic assessment task?



27

Nonword repetition tasks

How we see how students learn new information

28

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

One Syllable	Two Syllables	Three Syllables	Four Syllables
(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 chipe**	(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**

29

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.”

30

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.

31

- 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.

32

Nonword Repetition Tasks Phonological Awareness with Dynamic Assessment

Nonword

•Martha Spanish and English

•Andy Mack. English dominant

Dynamic assessment phonological

•Andy Mack. English dominant Spanish bilingual

•Martha. Martha Language loss in Spanish acquiring English

Bilingual extension Institute facebook and leadersproject.org

33

Dynamic Assessment
Pre-SLAM

Making Meaningful Predictions
and
Similarity of Function

34

Similarity of Function

Glass

Cup

35

Car

Bicycle

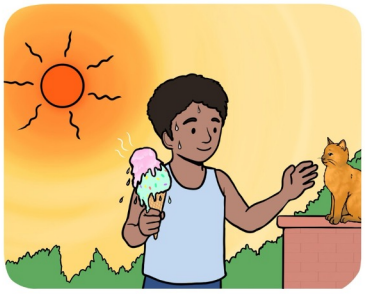
36

Similarity of Function

- Alexia

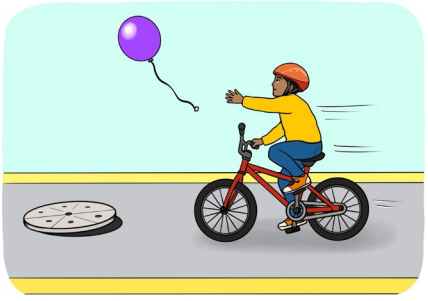
37

Making meaningful predictions EBP:



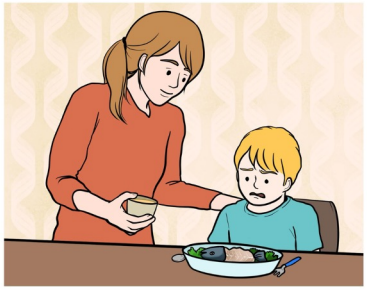
38

EBP: Clinician's expertise Ilustration needs to be redone



39

EBP: Consistent with child's and family's culture and values



40

Making Meaningful Predictions

- Boy from Uganda

41

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?

42

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."

43

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

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

44

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.

45

Each evaluation should have a similar framework

BUT

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

46

Selected References

Barragan, B., Castilla-Earls, A., Martinez-Nieto, L., Restrepo, M.A., & Gray, S. (2018) Performance of Low-Income Dual Language Learners Attending English-Only Schools on the Clinical Evaluation of Language Fundamentals–Fourth Edition, Spanish. *Language, Speech, and Hearing Services in Schools, 49*, 292–305.

Castilla-Earls, A., Bedore, L., Rojas, R., Fabiano-Smith, L., Pritt-Lord, S., Restrepo, M.A., & 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(3), 1116-1132.

Crowley, C. & Baigorri, M. (2019). Distinguishing a True Disability from "Something Else": Part I. Current challenges to providing valid, reliable and culturally and linguistically appropriate disability evaluations. In E. Ijalba, P. Velasco and C. Crowley, eds., *Language, Culture and Education: Challenges of Diversity in the United States*. New York, NY: Cambridge University Press.

Dollaghan, C., & Campbell, T. F. (1998). Nonword repetition and child language impairment. *Journal of Speech, Language, and Hearing Research, 41*(5), 1136–1146.

Hendricks, A.E., & Adolf, S. (2017). Language assessment with children who speak nonmainstream dialects: Examining the effects of scoring modifications in norm-referenced assessment. *Language, Speech, and Hearing Services in Schools, 48(3*), 168-182. doi: 10.1044/2017_LSHSS-16-0060

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

Kapantzoglou, M., Restrepo, M.A., Thompson, M. (2012). Dynamic Assessment of Word Learning Skills: Identifying Language Impairment in Bilingual Children. *Language, Speech, and Hearing Services in Schools, 43*, 81-96.

47

Selected References

Lam, J. H. Y., Resendiz, M. D., Bedore, L. M., Gillam, R. B., & Peña, E. D. (2024). Validation of the Mediated Learning Observation Instrument among children with and without Developmental Language Disorder in dynamic assessment. *Journal of Speech Language and Hearing Research*, *67*(7), 2159–2171.

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, 54(3), 782-293.

Núñez, G., Buren, M., Bailey, T., & Crowley, C. (2024). Dynamic changes toward reflective practice: Documented shifts in speech-language pathologists' evaluation practices. American Journal of Speech-Language Pathology, 33(6), 2921–2938

Peña, E. D., Gillam, R. B., & Bedore, L. M. (2014). Dynamic assessment of narrative ability in English accurately identifies language impairment in English language learners. *Journal of Speech, Language, and Hearing Research, 57(6*), 2208–2220. https://doi.org/10.1044/2014_JSLHR-L-13-0151

Petersen DB, Konishi-Therkildsen A, Clark KD, DeRobles AK, Frahm AE, Jones K, Lettich C, Spencer TD. Accurately Identifying Language Disorder in School-Age Children Using Dynamic Assessment of Narrative Language. J Speech Lang Hear Res. 2024 Dec 9;67(12):4765-4782.

Petersen, D., Chanthongthip, H., Ukrainetz, T., Spencer, T., and Steevea, R. (2017). Dynamic Assessment of Narratives: Efficient, Accurate Identification of Language Impairment in Bilingual Students. *Journal of Speech, Language and Hearing Research, 60, 983-998.*

Leadersproject.org "Disability Evaluations" "SLAM"

48