Dynamic Language Assessment for Bilingual Preschoolers

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What is Dynamic Assessment?

- Dynamic assessment does not assume all children come into a test with the same background knowledge/experiences (Patterson, Rodriguez, Dale, 2013).

- Dynamic assessment is focused on what a child can learn when given support and may predict later language abilities (Patterson, Rodriguez, & Dale, 2013).

- Dynamic assessment has been shown to be more effective than static assessment for children from culturally and linguistically diverse backgrounds (Peña et al., 2006).
Importance

- Current lack of bilingual norms for references. Bedore & Peña, 2008; Paradis, Emmerzael, Sorenson Duncan, 2010)

- Problems with both over and under-identification of language impairment in bilingual children (Bedore & Peña, 2008).

- Later English exposure may lead to the appearance of delays (Bedore & Peña, 2008)

- 3-5 year old latinos have lower rate of special education services than non-latino peers; opposite is true for school age children (Bedore & Peña, 2008).

- Inappropriate referrals of English Language Learning children for special education is well documented (Donovan & Cross, 2002; Genesee, Paradis, & Crago, 2004; Gutierrez-Clellen, Restrepo, & Simon-Cereijido, 2006; Klingner & Artiles, 2003).
Need for Bilingual Screening Tools

- Language complexity differs across languages (Thordardottir, 2005).

- Vocabulary knowledge is spread across two languages (Pearson & Fernandez, 1994; Peña et al., 2002).

- Children may show unusual grammatical patterns in one language based on influence of the other (Bedore & Peña, 2008). Assessment in only one language could result in erroneous diagnosis of language impairment.

- We must also consider that English proficiency is still developing for many bilingual school age children. Testing in only the dominant language is not appropriate.

- Bilingual children may experience language loss which can resemble language impairment (Paradis et al., 2010). It is important to have bilingual norms.
The Present Study

- **Purpose:** Advance development of a bilingual dynamic assessment (DA) language screening tool.

- **Research Question:** How does performance on dynamic language learning tasks including novel adjective learning, phonological awareness, prediction, and identification of similarity in function relate to year-end performance on the language subtest of the Learning Accomplishment Profile Third Edition (LAP-3)?

- **Prediction:** There would be a positive correlation between the three dynamic language subtests and year-end LAP-3 results.

- **Intended Use of the dynamic language tasks:** Identify bilingual children at risk for language impairment in order to implement further testing.

- **Research Design:** Correlation Study, Group Design

- **IRB approval:** IRB approval was gained prior to starting the study.
The Present Study (continued)

- Primary Investigator (PI) (Janet Patterson): designed study/gained IRB approval
- My role: recruited subjects from local Head Start locations, obtained informed consent, coordinated testing times with teachers, administered dynamic assessment measures, scored tests, coded and entered data, completed analysis of subset of data with PI support, completed literature review, and developed poster for presentation.
Participants

- 20 subjects who were presented with dynamic assessment tasks and whose parent's gave permission to access scores from Head Start testing for comparison with DA results.
- Subjects were recruited from local Head Start sites by an undergraduate and graduate student (the presenter)
- Informed consent obtained from all parents
- Children were 4 year olds who overall exposure to more Spanish than English or only Spanish at home
Methods

- Parent interview
- Dynamic assessment testing completed by presenter: subtests included novel adjective learning, similarity in function, and prediction task
- All subtests used a graduate prompting method of administration

How are these two things the same?
Methods

- Dynamic language tasks were administered during a 1 hour session. All dynamic assessment data gathered a minimum of 10 weeks prior to year end testing.

- Testing was video/audio recorded and checked for reliability and fidelity purposes.

- Learning Accomplishment Profile 3rd Edition (LAP-3) administered by Head Start staff and results obtained by researchers.
  - LAP-3 is a criterion-referenced measure which assesses various areas of development including language, cognition, pre-writing, social/emotional, and gross, and fine motor.
  - The LAP-3 language subtest was used for comparison with dynamic assessment scores.
Novel Adjective Learning

- Novel Adjective Learning: Involves teaching children a new adjective (from a different language) based on description of pictures.
Similarity in Function

- Children must identify how two objects are similar in terms of object function.
Prediction

- Shows the child a picture and asks them to predict what will happen next.
Scoring

- The fewer “clues” a child needs to get the correct answer, the higher the score they receive.

<table>
<thead>
<tr>
<th>Demo Item</th>
<th>Ula - Red</th>
<th>Target</th>
<th>No Prompt</th>
<th>Prompt 1</th>
<th>Prompt 2</th>
<th>Model</th>
<th>Notes/Observations</th>
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</thead>
<tbody>
<tr>
<td>Item 1 - Pololei (straight)</td>
<td>pencil</td>
<td>X</td>
<td>X</td>
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<tr>
<td>Item 2 - Melemele (yellow)</td>
<td>star</td>
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<td>Item 3 - Huinaha (square)</td>
<td>die</td>
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<td>Item 4 - Kea (white)</td>
<td>lightbulb</td>
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<td>Item 5 - Akumu (broken)</td>
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<td>Item 6 - Poepeoe (round)</td>
<td>yoyo</td>
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- Data analysis was conducted based on the last two items’ response performance.
Data Analysis

- Pearson’s product moment correlation coefficient was calculated for the following comparisons:
  - LAP-3 post language raw score/ Novel Adjective Learning last 2
  - LAP-3 post language raw score / Similarity in Function
  - Lap-3 post language raw score / Prediction
- Multiple regression analysis
- Analyses controlled for children's ages at the time of testing
Results

- Statistically significant positive correlation between Similarity in Function DA task and LAP-3 year end results: $r = 0.50, p < .01$
- Statistically significant positive correlation between Prediction DA task and LAP-3 year end results: $r = 0.53, p < .01$
- No significant relationship between Novel Adjective Learning and LAP-3 results
- Regression analysis for combined Similarity in Function/Prediction: $R = 0.65, p < .05$
Discussion

- Results indicate there is a positive correlation between two dynamic assessment tasks and year-end LAP-3 language subtest performance.

- Use of the prediction and similarity in function portions of this dynamic assessment tool is promising for use with bilingual latino children pending further investigation.

- Results were similar to predictions with some differences.

- Recommendations:
  - A future study should be completed to assess sensitivity and specificity of the screening tool (current study was correlational in nature and can’t prove causation).
Distribution of Information

- Presentation at UNM’s Shared Knowledge Conference
  April 6\textsuperscript{th}
- Proposal submitted for presentation at the American
  Speech-Language-Hearing Association National
  Convention in November 2017
- Contribution to manuscript currently in progress
What I learned

- Gained additional knowledge/understanding of dynamic assessment and its importance
- Increased knowledge of research process including: IRB, subject recruitment, data entry/coding, and data analysis
- Critical thinking skills with relation to research and data analysis
- Increased awareness of currently available tools for bilingual children
- Gained experience in collaborating with primary investigator, parents, and teachers
- Increased organizational and time management skills
- Improved confidence in my skills, abilities, and knowledge base
References


