Establishing Comparative Score Guidelines for Supporting High Quality English and Spanish Early Literacy Instruction and Intervention

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Background
- The assessment of language skills in both Spanish and English during the preschool years better predicts early reading ability in kindergartens and 1st grade than either language alone (Hammer, Miccio, and Wagstaff, 2007; Jackson, Schatschneider, & Leacox, 2014)
- The amount of exposure to both English and Spanish in home environments has been found to influence performance on assessments in each language in preschool (Bohman, Bedore, Feia, Mendez-Perez, & Gilliam, 2010; Hammer, Lawrence, Miccio, 2008)
- Classroom language of instruction has also been found to influence growth rates in each language (Barratt, Yarosz, Thomas, Jung, & Blanco, 2007; Durán, Roeth, Hoffman, & Robertshaw, 2013; Farver, Longin, & Epe, 2009)

Preschool teachers need guidance on how to interpret assessment information gathered in both language to make evidence-based instructional decisions (Barrera & Liu, 2010; USDHHS, 2013)

Decision-making Framework
- A decision-making framework has been recommended when using general outcome measures with ELs (Barrera & Liu, 2010; Fien, Smith, Chaparro, Luft Baker, & Preciado, 2011; García & Ortiz, 2006)
- The comparative score guidelines were designed to guide teachers through a decision-making process that includes children’s home language exposure and classroom language of instruction as well as tier designation in English and Spanish.
- Children’s home language exposure will be gathered using a Family Language Questionnaire developed during the S-IGDI development process. Based on current analyses children will be broadly categorized as Spanish-Dominant or Bilingual.
- Teachers will provide information about the quantity of Spanish and English used in their classrooms and will be categorized as English-only or bilingual via a classroom survey.
- Within our study 13 (28%) of our lead teachers reported their native language is Spanish, while 19 (43%) teaching assistants report their native language is Spanish (4 did not report). Similarly, when asked “who speaks Spanish in your classroom?” 27 (43%) of lead teachers reported they did, while 28 (60%) of assistant teachers reported they spoke Spanish in the classroom.
- As such, in alignment with research on best practices for decision making we must provide those professionals responsible for instruction with high quality tools to make meaningful and valid decision on behalf of SEIs.

Methods

Research Question
- How can we use student level characteristics to inform data-based decision making with the S-IGDI and the English IGI measures?
- What are instructionally relevant approaches for translating assessment data?

Participants
Students recruited for this study included 4-5 year old Spanish English bilinguals from UT, CA, FL, MN, KS, IL, and ID.

Research Design
- Students were recruited from Head Start, Migrant Head Start, Private Preschools and Volunteer Pre-K programs. 35% were males. Total consented sample included 241 children, however samples vary due to missingness or non-responses. To obtain language of instruction classroom teachers reported what language they use (100% return rate) and to obtain level of language exposure parents filled out a time-sampling matrix that reported what language was used in 4 hour blocks for a week’s return rate, 265 families.

The family survey indicated that based on a total sample of 256 parents who responded to the highest level of education question, 51 (19%) had a 4th grade education or less. 54 (20%) had completed less than 12th grade, 19% (9) received a GED, 56 (22%) received a high school diploma, 50 (19%) completed a vocational program after high school, 0 parents had an Associate degree, 13 (6%) had a BS or BA and 15 (6%) had a graduate or professional level degree. Similarly, 245 parents responded to the household weekly income question, results indicated 163 (67%) parents reported they make less than $300 per week, 67 (27%) parents reported they made between $300-$800 a week, no parents reported making between $800-$900 a week, and 15 (6%) parents reported making more than $900 per week.

Case Examples
Jose has a Tier 1 score on Spanish PN (12) and a Tier 2/3 score on English PN (4) and he is 5 year old Spanish English bilingual. His teacher should recognize that he has typical skills in his native language and should work with his family to support his continued Spanish development. The classroom the teacher should work with Jose in a small group to target his English language development and to adapt her instruction to his level of English proficiency.

Carmen is Carmen has a Tier 2/3 score in Spanish FS (5) and a score within the mid-range (9) on English FS. She is a balanced bilingual based on level of language at home and is in a bilingual classroom. Carmen would benefit from small group instruction focusing on phonological awareness in both languages. Her family should be encouraged to play alphabet games in both languages.

Results

Comparative Score Guidelines

Frequency Tables of Tier level Candidacy for First Sounds and Picture Naming

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<thead>
<tr>
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<th>Tier 1 (n/%)</th>
<th>Mid-range (n/%)</th>
<th>Tier 2/3 (n/%)</th>
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<td>Pronunciation</td>
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<td>Total Sample</td>
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<td>Language of Instruction</td>
<td>English</td>
<td>25 (10%)</td>
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</tbody>
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Implications & Conclusions
- Evidence indicates that SEB children perform differently based on level of language exposure and language of instruction, therefore instructional recommendations that attend to these differences are warranted.
- While the comparative score guidelines can aid teachers in thinking about instruction based on data-based decisions, more scalable preschool interventions in English and Spanish designed for and tested with SEBs are needed. More research is also needed to examine the efficacy of Spanish and English interventions that are commercially available.
- On Picture Naming in English 92% of the total sample was identified in the mid-range or Tier 2/3, although in Spanish 98% scores identified at these tier. On English First Sounds 75% were identified in the mid-range or Tier 2/3 and in Spanish only 54%. English-only assessment would likely result in over-identification and more Type I error.
- In the future more analyses are warranted to provide a more nuanced discussion of how children with various levels exposure to English and Spanish perform in English-only and bilingual settings. More information is also needed about the quantity and quality of Spanish used in bilingual settings and the comparison of the quality of instruction across bilingual and English-only classrooms.