Early Language and Literacy Skills of Spanish-Speaking Dual Language Learners

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Introduction

- The purpose of this study was to examine the early language measures that are the best predictors of English reading achievement among dual language learners (DLLs).
- Specifically, we evaluated whether assessing DLLs' Spanish language skills contributes to the prediction of English reading achievement.
- Emerging research conducted by Artiles and his colleagues suggests that within special education, there may be overrepresentation of DLLs at some grade levels and underrepresentation at other grade levels, because of inappropriate identification and instructional practices (Artiles, Aguirre-Muñoz, & Abedi, 1998; Artiles et al., 2005)
- DLLs from various language backgrounds experience difficulties with phonological awareness and word reading at similar rates as their monolingual peers and these difficulties are present as early as kindergarten (Lesaux, 2006).
- There is strong evidence to suggest that the problems children experience in learning to read during the elementary years and beyond are related to the pre-literacy skills that they bring with them from preschool and kindergarten (Lonigan, 2006).

Method

Participants

• Eighty-eight DLL kindergarten and first grade children aged 5-8 years participated in this study.
- Participants speak Spanish and English at home
- Participants consisted of students from various public and private schools from southeast Nebraska (42) and South Carolina schools (46).
- 49% of the participants were female

Measures

- English and Spanish Vocabulary
  - Expressive One-Word Picture Vocabulary Test, Spanish Bilingual Edition
- English and Spanish Grammatical Knowledge
  - Bilingual English/Spanish Assessment Sentence Repetition Test
- English Word Reading and Reading Comprehension
  - Woodcock Muñoz Language Survey
    - Letter-Word Identification
    - Passage Comprehension

Procedure

- Each participant was either given the English or Spanish assessments first and then tested again on a different date with the language that was not given the first time.
- Children were tested in a quiet room at their school.
- Parents were called to complete a survey taking about 10 minutes

Descriptive statistics for language and literacy measures

	N	Min	Max	Mean	SD
English Language					
Vocabulary	87	55	145	92.79	21.59
Syntax	87	55	115	89.54	18.84
Spanish Language					
Vocabulary	86	55	129	79.00	19.39
Syntax	83	55	120	87.17	16.97
English Reading					
Word Reading	41	50	118	85.20	16.71
Reading Comprehension	41	55	110	88.24	12.16

Correlations between measures of language and reading

	Eng Vocab	Eng Syntax	Spn Vocab	Spn Syntax	Eng Word Reading
Eng Vocab					
Eng Syntax	.72***				
Spn Vocab	-.13	-.14			
Spn Syntax	-.08	.17	.68***		
Eng Word Reading	.40*	.57***	-.01	.11	
Eng Reading Comp	.48**	.59***	.00	.10	.73***

Figure 1. ROC Analysis predicting risk for difficulty in English word reading
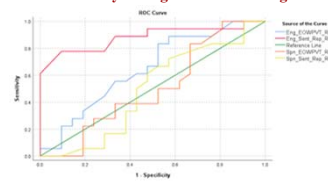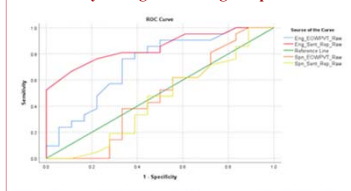

Figure 2. ROC Analysis predicting risk for difficulty in English reading comprehension

Results

- **Descriptive Statistics**
  - For all skills except English vocabulary, average scores for this sample were below 90 (the 25th percentile; cutoff used for risk for reading difficulty)

- **Correlations**
  - Language skills were strongly correlated with each other, within languages
  - Language skills were moderately correlated with reading skills within languages
  - Cross-language correlations were not statistically significant.

- **Regression Analysis**
  - When all language variables were included in the model to predict English reading, only English syntax scores were significantly predictive (b = .49, p < .01 for word reading; b = .28, p < .05 for reading comprehension).

- **ROC Analysis**
  - Based on performance on the Letter Word ID assessment, 21 students were considered at risk for reading difficulty and 18 were considered not at risk
  - ROC Analysis indicated that English syntax was the best predictor of risk for word reading difficulty (AUC = .88).
  - A cut score of 30.50 on the English syntax measure yielded sensitivity of .78 and specificity of .91, and classification accuracy of 85.4%

  - Similarly, English syntax was the best predictor of risk for reading comprehension difficulty (AUC = .83).
  - A cut score of 29.50 on the English syntax measure yielded sensitivity of .73, specificity of .79, and classification accuracy of 75.6%

Discussion

- The findings suggest that many bilingual children may be at risk for early literacy development and have low scores at the beginning of their school career which can impede later success.
  - This may be true even on measures of language skills in Spanish and English that were developed for use with bilingual children in the U.S.

- These comparisons provide insight into how to identify students with or at risk for language or reading difficulties.
  - Students who scored less than 29.5 on a measure of English syntax were considered at risk of difficulty in passage comprehension and those who scored less than 30.5 were considered at risk of difficulty in word reading. Those who scored higher than that may be less likely to develop a learning difficulty.

- Individuals who scored high in the English portion would usually score high on the English assessments. (positive correlation)
- Children who scored high in the Spanish portion would also score high on the Spanish assessments signifying that they have a positive correlation.
- However, Spanish language skills did not contribute to prediction of English reading outcomes