Language and Emergent Literacy in Monolingual and Bilingual Hispanic Children: The School Readiness Research Consortium Project

Markeisha Grant '11 -- Honors Thesis Research with Peter de Villiers (Psychology)

Introduction

• Some 20% of children entering school in the USA are learning two languages at once (Dual Language Learners – DLLs).
• 7% of those children are Hispanic.
• Many studies continue to document an “achievement gap” in English reading between Hispanic and White children in the USA.
• Environmental factors such as poverty, immigrant status, parental education levels (PEL), and poorer school resources in US Hispanic communities have all been implicated in this educational gap.
• Some researchers have also suggested that dual language learning may be a contributing factor to lower English reading achievement.

(Source: National Research Council, 2010)

Language Factors Contributing to Reading Development

• A great deal of research has shown that fluent reading development depends on language skills acquired during the preschool period.
• These skills include especially vocabulary, complex sentence syntax, and awareness of the phonological structure of words and the nature of print (Snow et al., 1998; Whitehurst & Lonigan, 2002).
• Phonological awareness and print knowledge are crucial aspects of emergent literacy acquired in the late preschool period.
• Lonigan (2006) and Metsala (2011) have proposed that phonological awareness is facilitated by the growth of vocabulary that requires the child to encode words in terms of their phonological structure as well as their meaning.
• Thus the bigger the child’s vocabulary, the better their phonological awareness skills should be (Lonigan, 2006).

Goals of the Present Study

• The present longitudinal study set out to investigate the relationship between dual language learning and English language and emergent literacy development in Spanish-English bilingual and English monolingual Hispanic children living in similar low-income communities in Houston, Texas.

Research Questions:
1. Are there differences in English language and emergent literacy skills between bilingual and monolingual children at the beginning of the preschool year? And are those differences maintained over the course of a preschool year of immersion in an English-only curriculum?
2. Are the English language and emergent literacy skills of the bilingual and monolingual children predicted by the same background and environmental variables (such as SES, parental education level (PEL), and IQ)?
3. Is the same relationship between size of expressive vocabulary and developing phonological skills found in bilingual and monolingual Hispanic children as has been reported for middle class White children and low-income African American children (Lonigan, 2006)?

Participants

• Data were analyzed from 155 Hispanic children (average age 4.6 at the beginning of the study) who were participants in an NIH-funded preschool curriculum intervention project (The School Readiness Research Consortium) for children from low-income communities in Houston, Texas.
• The children received a battery of cognitive, language and social assessments at the beginning of the preschool year (Time 1) and again at the end of the school year (Time 2), following various curriculum intervention conditions in their classrooms.

Procedure

• Two groups were selected from the 155 Hispanic children on the basis of the primary parents’ reports about their children’s hourly language use and exposure throughout the day to English and Spanish.
• This questionnaire has been shown to provide a reliable profile of the children’s language (Pena & Bedore, 2011).
• At the beginning of the school year (Time 2), following various assessments at the beginning of the preschool year (Time 1) and Readiness Research Consortium) for children from low-income funded preschool curriculum intervention project (The School at the beginning of the study) who were participants in an NIH-funded preschool curriculum.
• Verbal Memory was assessed in English by the Word Span subtest of the Comprehensive Test of Phonological Processing (CTOPP: Wagner & Torgeson, 1999)

Language Measures

• The children’s production of mainstream American English morphosyntax was assessed by the DELV Screening Test (DELV-ST: Seymour, Rooper, & de Villiers, 2005)
• Understanding of complex English sentence syntax was assessed by the Wh-Question Comprehension subtest of the DELV Norm Referenced Test (DELV-NR: Seymour, Rooper, & de Villiers, 2005)
• All of the children took a test of Nonverbal IQ (the Pattern Analysis subtest of the Stanford-Binet IQ Test).
• Verbal Memory was assessed in English by the Word Span subtest of the Comprehensive Test of Phonological Processing (CTOPP: Wagner & Torgeson, 1999)

Results -- English Language

• At the beginning of preschool (Time 1) the bilingual children were significantly behind their monolingual peers in their expressive English vocabulary on the EOWPVT (p=0.007)
• Their production of MAE morphosyntax also lagged a bit behind the monolingual children (p=0.06)
• At the end of the year of intensive English immersion, there was still a significant difference in expressive English vocabulary, but the significance level was reduced considerably (p=0.043).
• But the near significant difference in MAE morphosyntax from Time 1 had disappeared by Time 2 (p=0.417).
• As was the case at Time 1, there were no differences found between the bilinguals and monolinguals in Wh-question comprehension, Print Knowledge, or Phonological Awareness.

Background Predictors of Language

• Partial correlations controlling for age at both Time 1 and Time 2 revealed very similar background predictors of language and emergent literacy skills in the bilingual and monolingual children.
• For both groups at Time 1 and Time 2, Verbal Memory was the only consistent significant correlate of English language and literacy measures.
• Surprisingly, PED and HOME language stimulation were not significantly related to the English language skills of the children in either group. This appeared to be due to limited range effects in those measures.

Vocabulary and Phonological Awareness

• Extending Lonigan’s (2006) findings for White and African American children, the present study also found that for the monolingual Hispanic children vocabulary size at Time 1 was a substantial independent contributor to their phonological awareness scores at Time 2, even when effects of Age, Word Span and initial level of phonological awareness were controlled.
• However, an interesting effect was obtained for the bilingual children. Their English vocabulary scores on the EOWPVT were not predictive of their phonological awareness development in preschool. It was their combined Spanish-English vocabulary scores on the bilingual version of the EOWPVT that was the significant contributor to the children’s development of phonological awareness.

Conclusion

1. There were no significant differences between matched groups of English monolingual and Spanish-English bilingual children on crucial emergent literacy skills in preschool -- complex syntax, phonological awareness and print knowledge. This suggests that dual language learning is not a risk factor for poorer English reading development, and the factors determining the “achievement gap” are likely to be common to all low-income Hispanic children.
2. For bilingual children, their separate vocabularies in Spanish and English seem to interact to facilitate their awareness of the phonological structure of words. Not only does the bilingual child need to uniquely encode the English words they know, but they also need to keep their English and Spanish words separate.