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Facilitating Vocabulary Acquisition of Young English Language Learners

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FACILITATING VOCABULARY ACQUISITION OF YOUNG ENGLISH LANGUAGE LEARNERS

By

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I dedicate this thesis to my parents.

Sus oraciones y su apoyo incondicional me han llevado muy lejos.

Los amo.

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ABSTRACT

A vocabulary intervention during shared storybook reading was implemented with 22 Spanish-English bilingual children. One intervention consisted of English expansions of vocabulary words and the other of English-supplemented-with-Spanish instruction. Participants between the ages of 4 and 6 received both interventions during a four-week summer program. It was hypothesized that the intervention incorporating Spanish would produce greater learning in three areas: naming, receptive knowledge, and expressive definitions. It also was hypothesized that the children's initial language proficiency in each language would affect their learning from Spanish vocabulary expansions. Results revealed significant improvement in all three areas. The Spanish vocabulary expansions condition produced the greatest gains in expressive definitions. Also, the children's initial language proficiency in Spanish and English was found to affect the children's possible gains from the intervention. The thirteen participants with limited skills in both languages showed significantly less vocabulary growth than the participants who had strong skills in Spanish. Although both languages of intervention were beneficial, there were additional benefits to using Spanish expansions in the vocabulary instruction. Findings support previous literature that suggests shared reading is a useful tool to enhance word learning. This is especially true for bilingual children when supporting and strengthening a child's first language and facilitating second-language acquisition. Future research should explore additional ways of enhancing the vocabulary growth of children with limited skills in both languages.

CHAPTER 1

INTRODUCTION

The rapid growth of the Hispanic American population in the United States has become a topic of interest for educators and researchers in recent years. The United States Census Bureau (2000) reports that nearly 28.2 million people living in the U.S. speak a language other than English and report Spanish as their other language. Of these people, 6.8 million represent children between the ages of 5 and 17 (U.S. Department of Education [USDOE], 2001). The National Center for Educational Statistics recently reported that Hispanic children make up about 18% of the children in U.S. public schools, making them the largest minority population in public school systems (NCES, 2003). In 2001, the number of Spanish speaking students with limited English proficiency (LEP) exceeded 3.5 million children, with nearly 50% of them receiving English-only language instruction (Kindler, 2001).

Recent federal legislation proposes that every child must become a successful reader by the third grade (NCLB; 2001); however, Spanish-speaking children of migrant families are at greater risk for experiencing difficulty in early language and literacy acquisition (Diener, Wright, Julian, & Bylington, 2003; Snow, Burns, & Griffin, 1998; Vernon Feagans, Scheffner Hammer, Miccio, & Manlove, 2002). Increased risk factors for children with limited English proficiency include: poor oral language proficiency, poverty, few books in the home, and poor vocabulary knowledge (Snow et al.,1998). Hispanic children with limited English proficiency have been reported to be among the most vulnerable for low-literacy attainment, partially influenced by low socioeconomic status, education levels and limited access to print in the home (Diener et al., 2003; Vernon Feagans et al., 2002). Children with limited English proficiency (LEP) may face difficulties and delays in acquiring the emerging literacy skills and vocabulary knowledge needed to be successful at reading.

A review of the literature on lexical acquisition of bilingual children was conducted in order to identify potential strategies and supports for language and literacy growth. The lexical acquisition process and its relationship to bilingual children must be considered in examining promising intervention practices.

Semantic Acquisition and Bilingual Children

Children learn and understand concepts that are linked to words, their meanings, and how they are used within the meaningful contexts. Patterson and Pearson (2004) summarized strategies that monolingual children use to learn new words and the research that enhances current understanding of bilingual language learning. Initially, monolingual children form phonological representations of the words they hear, so they can to represent the sounds they hear in their minds and are able to recall these strings of sounds for later use. Research has shown that monolingual and bilingual toddlers perform similarly on nonsense word repetition tasks that tap into their phonological representation.

Investigations have also demonstrated that children learn words through fast-mapping or quick and incidental learning (QUIL). The research in this area shows that typically developing monolingual children are able to associate new words to a very general concept of what the words mean with brief exposures to the words (Oetting, Rice, & Swank, 1995). However, additional exposures and direct instruction are necessary in order to facilitate a deeper knowledge of the words children already know as they continue to categorize and refine their word associations. Limited information is available on how bilingual children use this strategy. The few available studies suggest that bilingual children perform similarly to monolingual children in their use of fast-mapping, which suggests that additional exposures and explicit explanations would benefit them in acquiring a deeper knowledge of words (Bedore & Leonard, 2000; Rohder & Tiefenthal, 2000).

The semantic feature hypothesis suggests that children associate one, two, or more semantic features of words from the complete set of features that would be part of the adult meaning of the word (Clark, 1973). A child can overextend or under-extend these features of words to other words that, to them, fit into their scheme for the meaning of those words. Over time, the child gains knowledge of additional semantic features that closely resemble the adult meaning of the word. Hence, as the child is exposed to multiple semantic features of words, his knowledge of words expands and assimilates to the adult definition.

Similar processes of semantic acquisition may be observed in young bilingual learners. Poulisse (1997) suggests that children represent and specify second language vocabulary through experience, in the same way they do for their first language. Over time, the bilingual children's vocabulary knowledge in both languages grows with multiple exposures and contexts, as they

associate additional semantic features with words similar to the language learning processes of monolingual children in one language. As they are exposed to language over time, the child learning two languages begins to recognize how words in one language relate to the corresponding word in the other language. In order to do this, they need to acquire a deeper knowledge of the meaning of words (Peña, Bedore, & Rappazo, 2003). Young bilingual learners may have difficulties acquiring this deeper knowledge of words in a second or non-dominant language (Ordóñez, Carlo, Snow, & McLaughlin, 2002).

Bilingual Language Proficiency Development

The bilingual literature differentiates between two types of second language acquisition. Sequential bilinguals are those that have been exposed to only one language for a few years and then later are exposed to and acquire a second language. Simultaneous bilinguals are those that have been exposed to two languages from birth and acquire both languages at the same time (Hoff, 2005). An example of a sequential bilingual learner is a child who moves to the United States at the age of 4 from a Spanish-speaking country where he learned only Spanish from birth and enters and English-only preschool classroom in the public school system. In contrast, bilingual children born in the U.S., who have been exposed to both English and Spanish since birth, are considered simultaneous bilingual language learners.

The Cummins' theoretical model of bilingualism aids in understanding how children attain second language proficiency (Cummins, 1984). One dimension of language proficiency that Cummins describes is *basic interpersonal communication skills* (BICS), which refers to language children use to carry out basic conversations in social contexts. Children are expected to acquire BICS in about 2 to 3 years of language use and exposure. Another dimension of language proficiency that Cummins describes is *cognitive academic language proficiency* (CALP), which refers to later developing language used to learn in academic situations such as analytical evaluations, reasoning, and the higher-level language aspects of educational settings. Cummins suggests that CALP develops in 5 to 7 years. Díaz-Rico and Weed have suggested that CALP places many more complex cognitive demands on the child who is learning a second language (2002).

The premise of a *common underlying proficiency* (CUP) between two languages is integral to Cummins' model of bilingualism. Based on this CUP, the learner uses the skills acquired in a first language to build knowledge in a second language (Cummins, 1981). For

example, a bilingual child may have been exposed to a concept or word in a certain language context, and may be able to apply his knowledge of this word when exposed to it in another language context. This CUP and the amount of time children have been exposed to English are important to consider when selecting instructional strategies for the English language learning of bilingual children.

Vocabulary Knowledge and Literacy

Research has established that typically developing monolingual children acquire emergent literacy skills prior to reading. These skills include development of phonological awareness, print knowledge, and oral language skills that include vocabulary knowledge (Whitehurst & Lonigan, 1998). Vocabulary knowledge strongly relates to later reading comprehension even after children learn to decode words (Baker, Simmons, & Kame'enui, 1995; Baumann & Kame'enui, 1991; Paul & O'Rourke, 1988; Stanovich, 1986). For students with LEP, learning to read in English may pose a difficult task if they do not yet have the necessary knowledge of English vocabulary essential for reading comprehension. As the No Child Left Behind Act (2001) is currently written, children failing to read would not typically be identified until the third grade. Waiting until they have difficulties in the third grade in order to explicitly target literacy skills, particularly English vocabulary instruction, may not be the most efficient way to teach these children if they are at risk when they first enter school (Biemiller & Slonim, 2001; Coyne, Simmons, Kame'enui, & Stoolmiller, 2004).

Kindergarten vocabulary, specifically expressive vocabulary knowledge, has been proposed as the second strongest predictor of later reading ability in monolingual children (Becker, 1977; Cunningham & Stanovich, 1998; National Reading Panel, 2000; Scarborough, 1998; Storch & Whitehurst, 2002). Although there is not much research in this area regarding bilingual populations, this relationship can also be applied to English Language Learners (ELLs). Children who make the transition to kindergarten with limited oral language or emergent literacy skills are at greater risk of having academic difficulties (Coyne et al, 2004; Rimm-Kaufman & Pianta, 2000). Vocabulary difficulties are greatly exacerbated for preschool aged ELLs that have limited knowledge and vocabulary in English and step into an English-focused instructional environment. Early intervention with these children who may be at risk for later reading difficulties may be beneficial before they enter into formal educational settings (Coyne, Kame'enui, & Simmons, 2001).

Facilitating English Vocabulary

Best practices for teaching vocabulary to monolingual children is an area that is presently under investigation with many gaps in current understanding, especially for younger children (Biemiller & Slonim, 2001; National Reading Panel, 2000). Facilitating English vocabulary acquisition for bilingual children presents additional challenges as there is limited research about effective vocabulary instruction for ELLs. The International Reading Association recommends that new, unfamiliar material be connected to material that the bilingual child already knows (2001). This recommendation can be expanded to include what the common underlying language knowledge in two languages, as proposed by Cummins' model of bilingualism (1981).

Explicit explanations of words have been shown to facilitate vocabulary learning in monolingual children. Elley (1989) reported that word explanations were beneficial, possibly even doubling the number of words children learned. Word explanations can be as simple as providing a synonym, using a role play or pointing to the illustrations in a book. Nagy and Herman (1987) previously termed this "elaborated exposure," where incidental exposures to words were accompanied by "decontextualized, meaning-focused adult explanations." Vaughn et al. (2006) attempted to summarize effectiveness studies for interventions for ELLs and found that there were few, if any, experimental intervention studies that provided a framework for teaching literacy skills for these children. The reported studies applied primarily to later elementary grades. These studies highlight the need for more research in understanding reading instruction in younger bilingual children, specifically in transitioning from reading in one language to another.

Vocabulary Bridging During Shared Reading

Based on Cummins' theoretical premise, a child's primary language (L1) can be used to build skills in a second language (L2). Knowledge of the meaning of the word in the child's primary language may be paired or associated with the lexical item in English to facilitate learning the English word. This strategy is called vocabulary bridging. It has been suggested as a way to teach English vocabulary to bilingual Spanish-English children with limited English proficiency (Ulanoff & Pucci, 1999). However, insufficient research has been conducted on how to best use this strategy with young Spanish-speaking children to prepare them to enter English-speaking classrooms.

Shared story-book reading has been proposed as a meaningful, naturalistic context that facilitates vocabulary learning by exposing children to new words, specifically to younger children who are non-readers (Biemiller, 2003; Coyne et al., 2004; Patterson & Pearson, 2004; Roth, 2002). Shared story book reading refers to an adult-child interaction in which the adult reads a story and provides some additional information for the child to understand the context and words in the story (Justice, Meier, & Walpole, 2005).

Providing Spanish instruction during English language lessons seems to be a promising way to improve bilingual children's oral language skills in English, as it would incorporate their knowledge of Spanish (L1), in order to bridge to English (L2) (Ryan, 2005). Although there have been few studies exploring this type of instruction, gains in children's learning have been observed, when compared to instruction provided completely in English. Perozzi and Chavez Sanchez (1992) compared the rate of receptive acquisition of English prepositions and pronouns of two groups of bilingual first graders, in which one group received additional Spanish instruction prior to English instruction, and the other group did not. Their results showed that children who received this additional Spanish instruction receptively acquired prepositions twice as fast as the English-only group. This supports Cummins' language interdependence hypothesis and also supports the use of native language instruction in order to improve skills in a second language.

Ulanoff and Pucci (1999) studied three groups of third grade Spanish-English bilingual children during shared book-reading. Group 1 listened to a story in English with no other instruction or explanations. Group 2 listened to the same story in English, and an adult translated the story to Spanish concurrently as the story was read. Group 3 was exposed to a discussion in Spanish about the book and its vocabulary before the storybook was read, then heard the story in English, and later reviewed the story again in Spanish. The children were given a pre- and post-test of 20 vocabulary words that occurred in the storybook. Those participants that received the preview/review of the book in Spanish made greater gains in the researcher-made vocabulary measure. The group that received concurrent translation of the book made the least gains when compared to both the preview/review group and the control group. This suggests that direct translation of words may not be enough to promote the children's comprehension of novel English words. Ulanoff and Pucci (1999) suggest that expanding vocabulary in Spanish through a preview/review method may be a promising approach to teaching English language learners in

the context of storybooks; however, more information is needed to determine the essential or critical aspects of this preview/review approach.

Previous studies of bilingual vocabulary learning typically provide limited information about their participants and methodology such as the children's current educational programs and number of children with Spanish as their primary language. Also, the criterion for determining that the children were English language learners is not commonly disclosed. In order to obtain information about the effectiveness of bilingual programs, information about the children's language proficiency and overall vocabulary knowledge in both English and Spanish is important. Given these limitations, the effectiveness of intervention strategies remains inconclusive.

Proposed Study

Further research is needed to determine the effectiveness of strategies to facilitate bridging and word learning in English language learners, especially those of preschool age. Over time, research has shown that repeated story-book readings can be useful in teaching children new words, however, to promote a deep knowledge of new vocabulary, a direct instructional approach may be necessary. Rich, elaborated exposure, and direct instruction of words in storybooks using simple Spanish terms may be a promising way to promote greater vocabulary gains in English for children with limited English proficiency.

The purpose of the present study was to examine the effects of repeated shared storybook reading with direct instruction relating vocabulary words back to the child's knowledge of Spanish, on the English vocabulary performance of Spanish-speaking ELLs. This study addressed the following questions:

a) Will Spanish-speaking children with limited English proficiency benefit more from an English-supplemented-with-Spanish direct vocabulary instruction than an English-only instruction during English shared book reading?

b) Will the children's initial linguistic characteristics (such as language proficiency or exposure and vocabulary knowledge) in both English and Spanish have an effect on their potential benefit from supplemental Spanish instruction?

CHAPTER 2
METHOD

Participants

Participants were recruited from children enrolled in a summer migrant education program. The program was designed to provide enrichment for children who speak a language other than English at home. This summer program served a Mexican-American population in a rural community of northern Florida in which many migrant workers reside. The classroom teachers provided primarily English instruction and were aided by Spanish-English bilingual high school students that were employed by the summer program.

Twenty-nine participants from a larger pool of students were selected for this study. Only those children with limited English proficiency between the ages of 4 and 6 were eligible to participate. Of the total of 29 children who qualified for the study, there were 22 who had complete data sets for the current analyses. The 22 children (11 girls, 11 boys) were between the ages of 49 and 82 months with a mean age of 62.27 months (*SD* = 10 months). All children were from Latino American backgrounds, as indicated by the parents and school records. The children had no identified disabilities or sensory impairments.

Eligibility. To be eligible for the study, the children first had to have parental consent. Of the 56 children recruited for the study, 37 had parental consent. All of the children with parental consent were administered the Peabody Picture Vocabulary Test (PPVT-III; Dunn & Dunn, 1997), a measure of single-word receptive vocabulary in English. There were 29 children that obtained a standard score of 85 or below and were eligible to participate in the study; however 7 of the children did not have complete data-sets. For the 22 children with complete data sets, the mean score on the PPVT-III was 64.64 (*SD* = 13, range 40-85).

Child and Family Demographics. The children's parents were contacted by phone for an interview regarding home language use, language history, country of origin, parental educational level, and literacy exposure in the home. Research assistants were able to reach 61% of the families by phone after multiple contact attempts were made. Given the highly migrant nature of the community, some families were unavailable. The information collected from these families indicated that 93% of the children's families were originally from Mexico and 7% were from El Salvador. Only 13% of the children were born outside of the United States, and of those, one child moved to the U.S. at the age of 4, and the other at the age of 1 year and 10 months. The

number of people living in the children's homes ranged from 3 to 7 (mean 4.7). In most families, there were two adults in the home. There were two families with a single adult in the home, one family with three adults in the home, and one family with four adults. Parents' educational levels ranged from a 6th grade to a 12th grade, with 71% of parents having reached at least 9th grade in high school or above.

All of the parents interviewed indicated that their children were learning English in educational settings or with older siblings or cousins. About 86% of the families indicated that Spanish was the primary language of the home, one family indicated speaking both Spanish and English at home, and one family indicated speaking Spanish and Mixteco, an indigenous language spoken in regions of Mexico. The parents also reported that at school, 43% of the children spoke primarily English, 50% spoke both Spanish and English, and 7% spoke only Spanish.

Descriptive Measures. In order to obtain information about the children's language proficiency and vocabulary knowledge in both English and Spanish, a series of standardized assessments were administered in addition to the measure used for eligibility. The Test de Vocabulario en Imágenes Peabody (TVIP; Dunn, Lugo, Padilla, & Dunn, 1986) was administered to assess the children's single-word receptive vocabulary in Spanish. The mean standard score for the TVIP was 89 (*SD* = 17, range 68-124). The Expressive One Word Picture Vocabulary Test – Spanish Bilingual Edition (EOWPVT-SBE; Brownell, 2001) was administered to assess the children's expressive vocabulary in both English and Spanish. The mean standard score for this test was 95 (*SD* = 19, range 61-127). The Preschool Language Assessment Scales – Spanish, (PreLAS; De Avila & Duncan, 2003) was administered to examine the children's proficiency in Spanish. The average Oral Language Proficiency score on the Spanish PreLAS was 3 (*SD* = 1.4, range 1-5). The Preschool Language Assessment Scales – English (PreLAS, 2000; Duncan & De Avila, 2003) was administered to examine the children's English language proficiency. The mean Oral Language Proficiency score on the English PreLAS was 1.5 (*SD* = .74, range 1-3).

Oral Language Proficiency. All of the children had been exposed to both English and Spanish, and were subdivided into two groups: (1) predominantly Spanish-speaking with limited proficiency in English (PS-LE), and (2) limited proficiency in both English and Spanish (LS-E). The children who were predominantly Spanish-speaking achieved PreLAS Spanish scores of 4 or

5 and PreLAS English scores of 3 or below. The children who performed poorly on both the English and Spanish PreLAS, with scores of 3 or below, were grouped in the category of limited proficiency in both (LS-E). There were 9 children in the predominantly Spanish-speaking group, and 13 participants with limited skills in both Spanish and English (Peña, Bedore, & Rappazzo, 2003).

Procedure

The intervention consisted of shared storybook reading sessions in English with explicit vocabulary instruction for 15-20 minutes a day. These readings were repeated three days a week with the same book and target vocabulary throughout the week (Elley, 1989). Four children's story books were used for the vocabulary instruction for a total of four weeks of intervention. A list of these books can be found in Appendix A. Each child received English-only vocabulary expansions with two books and supplemental Spanish vocabulary expansions with two other books. These vocabulary expansions were provided within the context of the book-readings so that, at times, the interventionist code-switched between English and Spanish within the book-reading. There were some children that did not obtain consent until after the first week of intervention, so they were included in three of the week-long interventions instead of four.

The vocabulary words were explained in the target language at the point in which they occurred in the books (Brett, Rothlein, & Hurley, 1996; Elley, 1989; Justice, et al. 2005; Penno, Wilkinson, & Moore, 2002). The first time a target word appeared in the book, the children were asked to repeat the word to increase the saliency of the target vocabulary words using the prompts "Say, ___" or "Repite, ___." The storybooks were modified so that each target word appeared three times in the story. Each time the word appeared in the story, a different semantic feature of the word meaning was given. For example, on the first exposure to "teeth," the adult asked the child to repeat the word. Then, the adult stated that teeth "are hard white bones in your mouth. There's a lot of them!" On the second occurrence of the word "teeth," the adult explained that teeth "help you chew food. Animals and people use their teeth to bite and eat." Finally, on the third and last occurrence, the adult further explained the meaning of teeth by saying that "brushing my teeth with a toothbrush was very important." In the Spanish condition, a similar procedure was followed. The only difference between the two conditions was the language in which the semantic features were provided. The books were always read in English and the target vocabulary words were always named in English. A complete list of the

vocabulary words and each semantic feature given in both the English and Spanish conditions can be found in Appendix B.

Book-Readings. During each reading session, the primary researcher invited 2-3 children at a time to participate and asked them if they wanted to hear a story. The children were brought to a quiet hallway or the school library and were instructed to sit down. The interventionist introduced the book by saying "*Today we are going to read a book called _____*." The interventionist then proceeded to read the storybook out loud following the modified scripted text until a target word was reached. When a target word first occurred in the text, the interventionist asked the children to repeat the word, while pointing to the picture that depicted the target word. Then, the interventionist followed a script that defined and expanded upon the word meaning in the target language while maintaining the book position for children to see the illustrations. Once the book reading was completed, the interventionist returned the children to their classrooms. During the readings, the interventionist did not provide any additional information to the children other than the script of the book readings. Comments related to behavior management issues were used as needed to redirect the children's attention back to the task (i.e., "Please sit crisscross applesauce," or "Escucha por favor").

Book and Language Assignment. A counterbalanced procedure was used to randomly assigned participants to receive vocabulary instruction with all of the books. The participants were also counterbalanced in assignment to English or Spanish instruction conditions. This procedure was used to control for differences between individual book characteristics and the language of instruction used for each book. After the children were assigned to their randomized order of books and language of intervention, they were randomly selected to participate in small reading groups of two to three children. The counter-balanced order that children received the book readings in each condition can be found in Appendix C.

Research Assistants. Research assistants were graduate students in speech-language pathology at Florida State University or trained Spanish-English bilingual community volunteers. The English assessments were administered by native English speakers and by Spanish-English bilinguals with spoken English proficiency. Native Spanish-speakers and trained English-Spanish bilinguals administered the Spanish assessments. As part of their training, the research assistants were required to read the administration instructions for each of the assessments and were observed during at least two administrations by the primary

researchers to ensure they followed the prescribed directions. Whenever necessary, the research assistants were required to administer the assessments to the primary researcher to ensure procedural fidelity.

Dependent Measures: Researcher-Made Vocabulary Assessments

Two informal researcher-made vocabulary probes were developed and administered in order to assess the children's receptive and expressive knowledge of the target vocabulary words before and after the intervention. These assessments, testing procedures, and scoring procedures are described below.

Expressive Vocabulary Probe. The expressive probe consisted two parts: an expressive definition and an English naming portion. The naming probe required the child to label the picture in English. The child was presented with a picture and was asked to label it with the prompt, "What is this?" If the children provided a label in Spanish, they were encouraged to label the picture in English. Then, in the expressive definition portion, the child was asked to define each word with the probe "Tell me something you know about ___" or "Dime algo que sabes sobre ___." Each child was encouraged to provide an additional feature of the word with the probe "Tell me something else about ___" or "Dime otra cosa sobre ___." The pictures used for these tasks were scanned directly from the storybooks that would be targeted in the intervention. An example of the expressive vocabulary probe can be found in Appendix D.

Receptive Vocabulary Probe. The receptive probe consisted of presenting the child with three pictures the child had not seen before which were similar in size, color, and quality of illustration (Appendix D). The child was asked to identify the picture of the word being said, following the general format of the PPVT (Dunn & Dunn, 1997). The research assistants used the prompts "Show me ___" or "Enséñame ___" and the child was asked to point to the picture of the requested item.

Testing Procedure. The assessments were administered in a hallway of the school or in the media center by the primary researcher or a trained bilingual research assistant. Both the receptive and expressive probes were administered in their entirety before the intervention phase began. At the end of each week, the children were administered a shortened version of both probes that assessed the words they had targeted that week. The expressive portion of the probe was always administered before the receptive portion of the probe to ensure that the children generated their own definitions and were not exposed to the words beforehand.

Scoring Procedure. The receptive probe was scored by tallying the number of items the child identified correctly with a possible score of 20 (10 words in each condition). The expressive probe scores were divided into two categories: naming in English, and expressive definition. The naming in English portion was scored by tallying the number of words the child was able to independently identify in English with a total possible score of 20 (10 words in each condition). The expressive probe was scored using a conceptual scoring scheme adapted from Bedore et al. (2005) and Justice et al. (2005). This scoring scheme was selected, because it allowed the child to respond in either language, Spanish or English. The child's responses were scored based on their expression of the conceptual definition and were not penalized by their limited skills in one language versus another. The scoring scheme had four categories: no knowledge, emergent knowledge, partial/incomplete knowledge, and complete knowledge. Each child received a score of 0-3 on each word, and the sum of these scores was used for the analyses. The total possible score for the expressive definitions was 60 points (3 points for each of the 20 words). A detailed description of the scoring scheme is available in Appendix E. The investigator and a trained research assistant independently scored each of the expressive probes, and then met and resolved any discrepancies in the scores. Initial inter-rater reliability was above 80%.

Data Analysis

The primary researcher scored all descriptive measures and entered their scores into a database in SPSS version 14. These were verified by trained research assistants for fidelity. The primary researcher and a trained bilingual research assistant scored all of the dependent measures independently and then met to resolve any discrepancies in the scores. These scores were then entered into the database by the primary researcher and were verified by the faculty advisor.

Mixed analyses of variance were calculated on each of the three dependent measures of vocabulary growth. Each of the 2 x 2 x 2 ANOVAs contained two within-subject factors: time (pre and post) and the language of intervention (Spanish and English), and one between-subjects factor (initial language proficiency).

Reliability

Six 15-minute book-reading sessions were videotaped to ensure procedural fidelity. The videotapes were reviewed by the primary researcher. During these sessions the interventionist followed the scripted text in the books 99% of the time (119 out of 120 opportunities).

CHAPTER 3

RESULTS

The primary purpose of this investigation was to determine the effect of a vocabulary intervention on young children with Limited English Proficiency (LEP) when presented with English or Spanish vocabulary expansions during repeated shared storybook reading. Three dependent variables were used to measure the children's vocabulary growth of the target words: (1) English naming, (2) receptive vocabulary, and (3) expressive definitions. The extent to which the children's initial language proficiency affected their benefit from the intervention also was examined.

A mixed analysis of variance (ANOVA) on each of the dependent measures for time, language of instruction, and initial language proficiency resulted in no significant interactions between the three factors. However, a significant interaction was observed between the language of instruction and learning of the expressive definitions. Also, results showed significant interactions between initial language proficiency and overall growth on all three dependent measures. There were significant differences between the children's pre and post scores on all three vocabulary measures

Descriptive Data

Repeated and non-repeated measures of expressive and receptive language were used to describe participants' vocabulary skills. The groups of females and males showed different expressive language skills prior to the intervention. Females demonstrated significantly higher scores on the Expressive One Word Picture Vocabulary Test than males. Females had higher means on the other standardized measures of bilingual expressive vocabulary, receptive Spanish vocabulary, and Spanish language proficiency although these differences were not statistically significant. Analysis of differential treatment effects by gender could not be conducted due to the fact that the gender groups were not equally distributed in their language skills. Participant means on non-repeated descriptive measures by gender are listed in Table 1.

The covariance between participants' performance on researcher-made vocabulary probes and standardized measures was examined. All scores on standardized measures were converted to standard scores. Pearson product-moment correlation coefficients between the post-test researcher-made probe scores and corresponding standardized scores were computed to examine the strength of the association between researcher-made probes and standardized measures.

Table 2 demonstrates the correlation coefficients for each test pair. The results showed a strong positive correlation between the naming probe and the English PreLAS. If the children had low scores on the English PreLAS (mean=1.5; *SD* = .74), then their scores on the naming task were also low (mean = 3.55; *SD* = 3.40), so they were less likely to make gains in expressive naming of novel English words. The naming probe also showed a moderate positive correlation to the PPVT, EOWPVT, TVIP, and the Spanish PreLAS. These relationships demonstrate that the participant's individual language characteristics in terms of receptive and expressive vocabulary knowledge and Spanish proficiency were related to how much their naming scores increased. The receptive probe showed moderate positive correlations with the EOWPVT, TVIP, the PPVT, the Spanish PreLAS, and the English PreLAS. Also, the expressive definitions probe resulted in a moderate positive correlation with the EOWPVT, TVIP, the Spanish PreLAS, and the English PreLAS. These relationships between the receptive and expressive probes with the standardized measures may illustrate how individual participant characteristics were related to their knowledge of the targeted vocabulary following intervention.

Time, Language of Intervention, and Initial Language Proficiency

The mixed ANOVAs resulted in nonsignificant interactions between time, language of instruction and language proficiency groups on any of the dependent variables: naming (p = .97), receptive (p = .13), and definitions (p = .79). Table 3 presents a descriptive summary of each language proficiency group's scores on the three dependent measures of vocabulary for the Spanish and English instruction conditions. Although there were no significant interactions among all three factors, results showed significant two-way interactions between time and language of instruction and also time and initial proficiency.

Language of Instruction

Pre and post scores on all three measures (naming, receptive vocabulary, and expressive definitions) were compared for each of the languages of vocabulary instruction. The average growth for each of the dependent measures by language of instruction is presented in Table 4.

A repeated-measures ANOVA was conducted to determine the effect of the language of vocabulary instruction (English or Spanish) on each of the three dependent variables. A significant interaction was observed between the language of instruction and changes in pre and post expressive definition scores (F = (1,20) 5.77, p = .026, $\eta 2$ = .224, observed power = .63). When instruction was provided in Spanish, the expressive definition scores were significantly

higher than when it was provided in English (Figure 1). Participants demonstrated greater growth in their expressive definition knowledge when instructional expansions of English words were provided in Spanish during repeated shared book-readings. In other words, children showed improved ability to define targeted English words when the definitions and explanations of the word meanings were taught in their first language, Spanish.

There were no significant interactions between language of instruction and naming (F = (1,20) 3.72, p = .07, η2 = .16, observed power = .45) or receptive vocabulary (F = (1,20) .064, p = .803, η2 = .003, observed power = .06). Participants performed similarly on pre and post measures of naming and receptive vocabulary in both treatment conditions.

Initial Language Proficiency

Vocabulary growth scores were also compared between groups who differed in language proficiency scores: 1) proficient in Spanish but limited English (PS-LE), and 2) limited in Spanish and English (LS-E). Table 5 reports the average growth for the three dependent measures by language proficiency groups.

A repeated-measures ANOVA, with initial language proficiency as a between-subjects factor, yielded significant interactions between proficiency and vocabulary gains in naming (Λ = .806, F (1, 20) = 4.81, p = .04, η^2 = .19, with an observed power of .55), receptive vocabulary (Λ = .763, F (1, 20) = 6.2, p = .022, η^2 = .24, with an observed power of .67), and expressive definitions (Λ = .732, F (1, 20) = 7.32, p = .014, η^2 = .27, with an observed power of .73). The children with basic Spanish proficiency and limited English (PS-LE) had significantly greater gains than those with limited skills in both languages (LS-E). Figure 2 illustrates these gains across all three dependent measures for each proficiency group. Both groups had similar scores at the pre-test on naming and receptive definitions. The PS-LE group had higher pre-test scores than the LS-E group on expressive definitions. Univariate comparisons revealed that this initial difference in expressive definition pre-test scores was not statistically significant (p = .101).

Overall Growth

Comparison between pre and post scores on researcher-made vocabulary probe results across both English and Spanish conditions yielded improvement in expressive naming, (F (1, 20) = 16.36, p = .001, η^2 = .45, with an observed power of .97), receptive vocabulary (F (1, 20) = 112.67, p = <.001, η^2 = .85, with an observed power of 1.0), and expressive definitions (F (1, 20) = 46.11, p = <.001, η^2 = .70, with an observed power of 1.0). Table 6 presents the pre and post

scores for each dependent variable across all participants on all of the targeted vocabulary words in both treatment conditions, which was a total of 20 words. The participants gained an average of 1.82 points on the expressive naming task, meaning they were able to name 1 to 2 more words in English after explicit vocabulary instruction. They also gained an average of 5.77 points on the receptive task, so they were able to recognize 5 to 6 more words at post-test when provided with 3 pictures and a target stimulus word. Participants' scores on the expressive definition task increased by an average of 4.86 points out of 60 possible points (3 points per word), meaning they were able to expressively define 1 to 2 more words at post-test, or were able to partially explain 3 to 5 new words.

Table 1: Descriptive Vocabulary and Language Proficiency Measures by Gender

Descriptive Measures	Females *n* = 11 Mean (*SD*)	Males *n* = 11 Mean (*SD)*
Age in Months	65.91 (12.32)	58.64 (8.36)
EOWPVT-B Standard Score (expressive bilingual vocabulary)	104.45 (15.53)*	85.35 (17.96)*
PPVT-III Standard Score (receptive English vocabulary)	63.55 (14.31)	65.73 (13.05)
TVIP Standard Score (receptive Spanish vocabulary)	93.27 (15.52)	85.54 (17.32)
PreLAS Spanish Language Level (language proficiency in Spanish)	3.45 (1.21)	2.36 (1.50)
PreLAS English Language Level (language proficiency in English)	1.64 (.67)	1.36 (.81)

*p<.05.

Table 2: Correlation Coefficients for Researcher-Made Probes and Standardized Measures

	Naming	Definitions	Receptive	EOWPVT	TVIP	PPVT	Spanish PreLAS
Definitions	.786**						
Receptive	.724**	.654**					
EOWPVT	.477*	.524*	.713**				
TVIP	.435*	.579**	.457*	.580**			
PPVT	.551**	.370	.491*	.413	.369		
Spanish PreLAS	.437*	.641**	.646**	.643**	.660**	.325	
English PreLAS	.832**	.754**	.612**	.439*	.609**	.552**	.325

** significant at the 0.01 level (2-tailed).
* significant at the 0.05 level (2-tailed).

Table 3: Summary of Scores on Dependent Measures by Language of Intervention

	PS-LE Group $n = 9$		LS-E Group $n = 13$	
	Mean	SD	Mean	SD
Naming				
Spanish Tx-Pre	.67	.87	.69	1.03
Spanish Tx-Post	2.44	2.19	1.38	1.61
English Tx-Pre	1.00	1.12	1.08	.95
English Tx-Post	2.33	2.12	1.31	1.18
Receptive				
Spanish Tx-Pre	5.11	1.83	4.46	2.02
Spanish Tx-Post	8.44	1.02	7.31	2.29
English Tx-Pre	4.67	1.80	5.23	2.01
English Tx-Post	8.88	1.09	7.00	2.08
Definition				
Spanish Tx-Pre	3.22	1.64	1.77	1.88
Spanish Tx-Post	8.00	2.96	4.23	3.06
English Tx-Pre	5.00	3.67	3.15	2.58
English Tx-Post	7.56	3.21	3.84	3.41

Note. PS-LE = primarily Spanish and limited English, LS-E = limited Spanish and English.

Table 4: Average Growth for Dependent Variables by Language of Instruction

Dependent Variables	Spanish Instruction $N = 22$	English Instruction $N = 22$
	M (*SD*)	*M* (*SD*)
Naming Growth	1.14 (1.52)	.68 (1.17)
Receptive Growth	3.05 (1.76)	2.73 (2.27)
Definition Growth	3.41 (3.10)*	3.0 (2.71)

*$p<.05$.

Table 5: Average Vocabulary Growth for Dependent Variables by Language Proficiency

Dependent Variables	PS-LE $n = 9$ *M* (*SD)*	LS-E $n = 13$ *M* (*SD)*
Naming Growth	3.11 (2.93)	.92 (1.75)
Receptive Growth	7.44 (2.24)	4.62 (2.84)
Definition Growth	7.33 (2.87)	3.15 (3.95)

Note. PS-LE = primarily Spanish and limited English, LS-E = limited Spanish and English.

Table 6: Average Growth Scores for Dependent Variables Across All Participants

Dependent Variables	Pre-Test Mean (*SD*)	Post-Test Mean (*SD*)	Difference Mean (*SD*)
Naming	1.73 (1.49)	3.55 (3.40)	1.82 (2.50)
Receptive	9.73 (2.76)	15.50 (3.42)	5.77 (2.93)
Definition	6.27 (4.65)	11.14 (6.44)	4.86 (4.06)

*$N = 22$.

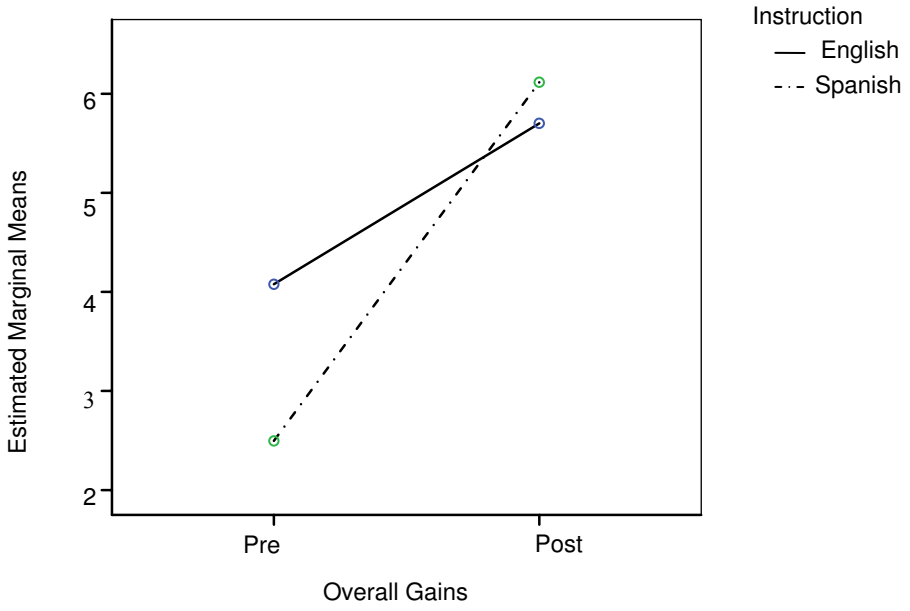


Figure 1. Interaction between expressive definition growth and language of instruction. When instruction was provided in Spanish, greater growth was observed than when provided in English.

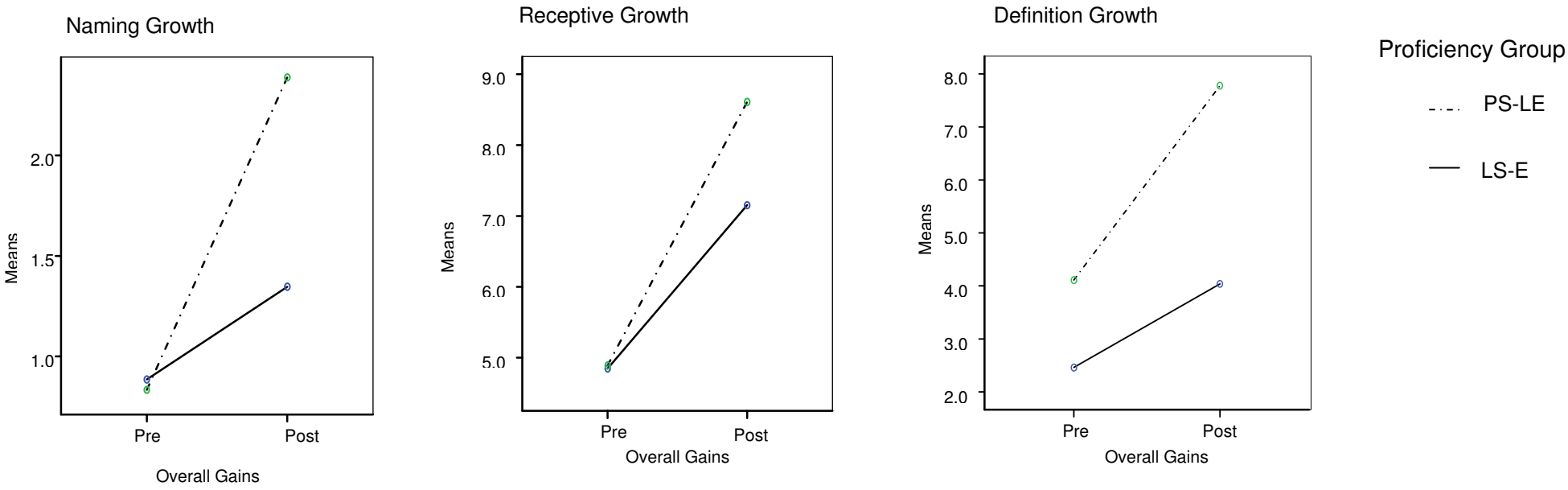


Figure 2. Interactions between initial language proficiency and vocabulary growth on researcher-made measures of naming, receptive, and expressive definitions of the target vocabulary. Participants with basic Spanish proficiency and limited English (PS-LE) showed greater gains on all three dependent measures than those with limited skills in both Spanish and English (LS-E).

CHAPTER 4
DISCUSSION

This study examined the effect of vocabulary instruction embedded into shared-book reading on the word learning of children with Limited English Proficiency (LEP). The results will be discussed in terms of 1) key findings 2) limitations, 3) clinical relevance, and 4) recommendations for future research.

Key Findings

This study sought to answer two questions: 1) do Spanish-speaking children with limited English proficiency benefit more from an English-supplemented-with-Spanish direct vocabulary instruction than an English-only instruction during English shared book reading? and 2) do the children's initial linguistic characteristics (such as language proficiency or exposure and vocabulary knowledge) in both English and Spanish account for differences in children's benefit from supplemental Spanish instruction?

Language of Intervention. The data suggest that the Spanish expansions of novel vocabulary words during English story-book reading resulted in greater growth in the children's expressive knowledge of the target vocabulary words. The advantages of Spanish bridging in the current study should be interpreted cautiously since there was not a statistically significant benefit for two of the three dependent measures. The effect sizes for the interaction between language of instruction and expressive definitions (.22) accounted for a relatively small amount of the variability in vocabulary growth (Cohen, 1988). Although the effect sizes were small, the Spanish vocabulary expansions demonstrated a slight advantage of bridging to the child's native language. This finding is consistent with previous studies which suggest bridging to be a promising intervention strategy for second language learning (Perozzi & Chavez Sanchez,1992; Ryan, 2005; Ulanoff & Pucci,1999). Results also suggest benefits of comprehensible input. Comprehensible input refers to the notion that children learn a first or a second language by understanding messages that are comprehensible (Krashen, 1994). By providing the vocabulary expansions in a comprehensible way, young children showed slightly greater improvements in their explanations of the targeted words. .

Initial Language Proficiency. The statistical analyses suggest that those with stronger proficiency in at least one language showed greater benefits from the intervention. Between-subjects ANOVA resulted in an interaction between the children's initial language proficiency

and their vocabulary gains in terms of naming, receptive knowledge, and expressive definitions of the words taught. Children with good Spanish proficiency and limited English skills (PS-LE) outperformed the group that had limited skills in both English and Spanish (LS-E).

Children with limited skills in both languages did not demonstrate equivalent word gains as children with proficiency in one language. The children who did not have a strong language base in either language, appeared to have had additional difficulties in acquiring new words given a strictly oral-language based intervention. Previous literature suggests that children's word learning may be related to the size of the child's current vocabulary, which is consistent with the results of this study. The children with limited skills in both English and Spanish showed less responsive to word learning interventions. Limited word learning in preschool children with delayed language is consistent with previous studies (Dollaghan, 1987; Oetting, Rice, & Swank, 1995; Rice, Buhr, & Nemeth, 1990). These results are also consistent with Cummins' common underlying proficiency hypothesis, which suggests that children benefit from the use of their knowledge of a first language (L1) to enhance skills in another language (1981). Based on this premise, children who had limited skills in their first language were at a disadvantage in bridging during second language learning.

The lack of vocabulary gain from the intervention by children with limited proficiency in both languages may also be attributed to thresholds of bilingual development. Cummins (1979) posed that three threshold levels of bilingual development exist: 1) additive or balanced bilingualism, 2) non-balanced bilingualism, and 3) limited bilingualism or semi-lingualism. Additive bilingualism refers to a balanced bilingual proficiency among all of a learner's language knowledge and has been hypothesized to relate to positive cognitive-linguistic effects. Non-balanced bilingualism refers to appropriate development in one language, but not both. There have been no negative or positive cognitive-linguistic effects attributed to this level. Limited bilingualism, or semi-lingualism, refers to a low competence in both L1 and L2. Semi-lingualism has been hypothesized to produce negative cognitive-linguistic effects. Many of the participants of this study fall into the second category of non-balanced bilingualism. However, there were thirteen children that fit into the semi-lingual category. Their limited skills in both English and Spanish interfered with their gains from the interventions. Cummins suggests that, in these cases, there should be a focus on developing and strengthening L1 in order to promote the attainment of L2 (1981).

The results provide evidence that children with strong initial language skills in at least one language, in this case Spanish, demonstrate greater growth following intervention. This is consistent with Cummins' view of bilingualism, in that children share a common underlying proficiency (CUP) between languages that aids in second language acquisition (1981). However, over one third of the participants in this study showed limited skills in both Spanish and English, limiting gains from either intervention, independent of the language of instruction. In sum, those children that had a good Spanish proficiency (L1) and limited English (L2) skills benefited the most from vocabulary expansions of unfamiliar vocabulary words during shared book reading.

Although it appears that good first language proficiency provides an advantage for second language learning, these findings should be interpreted cautiously due to the fact that proficiency classifications were strictly based on the children's scores on the Pre-LAS. It was not feasible to obtain information about the participant's overall language abilities using global language measures such as the Preschool Language Scale (Zimmerman, Steiner & Pond, 2002) or the Clinical Evaluation of Language Fundamentals (Wiig, Secord, & Semel, 2003), due to the short duration of the summer program. The Preschool Language Assessment Scales (Spanish and English versions) were given; however, these measures are screening tools that only provide information about children's basic proficiency in each language through a brief sampling of their phonological, lexical, syntactic, and pragmatic use of the language.

Overall Growth. Results revealed that, overall, the participants showed significant differences between pre and post- scores on researcher-made measures of naming, receptive knowledge, and expressive definitions of target vocabulary across both intervention conditions. This supports the claim that exposure to books with embedded vocabulary instruction facilitates lexical acquisition (Biemiller, 2003; Coyne et al., 2004; Justice, Meier, & Walpole, 2005; Senechal, 1997).

When comparing their average growth scores, the participants demonstrated greater gains in receptive knowledge of the target vocabulary than in naming or in expressive definitions. They receptively gained 25% of the words presented (5.77 out of 20 words). The children also made statistically significant gains in naming targeted English words after several exposures (1.82 words out of 20) and increased their scores on an expressive definition task by 4.86 out of 60 possible points. The children's gains in receptive vocabulary were much higher than their growth in naming. This discrepancy in performance between receptive and expressive

vocabulary may be potentially explained by typical lexical progression or an increased chance of guessing the correct response on the receptive probe. Although the receptive task involved chance guessing, an equal opportunity to guess the correct response was present at both pretest and post-test administrations. Because the pre and post difference scores were higher for receptive recognition than expressive naming, the discrepancy in receptive and expressive difference scores potentially reflects typical word learning development. This is consistent with previous research in which monolingual young children demonstrate superior receptive word knowledge and skills prior to expressive skills (Benedict, 1979; Bates, Bretheron, & Snyder, 1988). Results of a study of German vocabulary learning in bilingual children suggest that this receptive-expressive gap is not an atypical pattern in bilingual language learning (Rohder & Tiefenthal, 2000).

The effect sizes for overall vocabulary growth following the intervention were relatively small on all three dependent measures. This could be partially explained by the size of the child's current vocabulary, which has been shown to affect children's benefits from intervention (Oetting, Rice, & Swank, 1995; Rice, Buhr, & Nemeth, 1990). This limited growth may have also been influenced by environmental factors. Family interviews conducted for this study suggest that many of the participants had limited exposure to vocabulary and shared book reading. The vocabulary growth of the participants, especially those with limited skills in both languages, seems comparable to that of low-income monolingual children in the U.S., for which, experiential differences account for large gaps in vocabulary knowledge and emergent literacy. Previous studies with monolingual children have reported correlations between lower levels of emergent literacy attainment and low oral language proficiency (Bird, Bishop & Freeman, 1995; Bishop & Adams, 1990; Catts, 1993; and Magnusson & Naucler, 1993). Other studies have provided evidence of lower frequency of exposure to language and literacy in low socioeconomic households, which may contribute to low levels of emergent literacy skills (Feitelson & Goldstein, 1986; Justice & Ezell, 2001; Lonigan, Bloomfield, Anthony, Bacon, Phillips, & Samwel, 1999; Whitehurst, Epstein, Angell, Payne, Crone, & Fischel, 1994).

Gender. Although the current study was not designed to examine gender differences, gender comparisons of the descriptive measures must be considered when interpreting the results of this study. Female participants, on average, demonstrated superior performance on the Expressive One Word Picture Vocabulary Test (Brownell, 2000) and the test of Spanish

proficiency (PreLAS, De Avila & Duncan, 2000) prior to the beginning of intervention. This discrepancy in language scores prior to intervention may suggest that the girls showed superior readiness or better language learning abilities. The effects of gender and oral proficiency on responsiveness to language learning intervention cannot be determined from the current study and warrant further examination in future studies.

Limitations

The four week length of the summer program limited the duration of the study, and access to the population for follow-up data collection. Greater differences may have been observed if there would have been a longer intervention period. Ideally, information about maintenance and generalization would have been collected. However, due to the migrant nature of this population, many of the participants moved away shortly after the summer program ended and returned on a seasonal basis. This negatively affected the feasibility of measuring the generalization and maintenance of the learned vocabulary. Also, information about the children's cognitive abilities was unavailable, other than the exclusion criteria that none of the children had diagnosed disabilities. Without assessment of the participants' intellectual abilities it cannot be determined if their cognitive ability may have accounted for some of the variation in performance particularly for those children with limited language proficiency in both languages.

Because the participants received the treatment in small groups, the possibility of a cluster dependency must be considered. The investigators propose that the groupings appeared to have little or no effect on the children's ability to learn the words; however, a cluster dependency cannot be ruled out empirically.

The sample size was also a limitation. A larger sample of subjects would increase the power of the analysis (Cohen, 1988). A larger participant pool in this geographical area could not be obtained due the limited number of children available in this region with similar backgrounds in that they were primarily from Mexico, had been exposed to English since preschool, had limited English proficiency, and were also between the ages of 4 and 6.

The limited availability of assessments for bilingual children posed limitations to the procedures. The Preschool Language Assessment Scales in English and Spanish (De Avila & Duncan, 2000; Duncan & De Avila, 2000) were used to assess the children's language proficiency. Although, using a single test of oral language proficiency is limited in sampling general language abilities, the PreLAS has a relatively strong positive correlation to other

proficiency measures such as the Woodcock Language Proficiency Battery-Revised (r = .91) (Schrank, Fletcher, & Alvarado, 1996).

Clinical Relevance

The results of this study provide additional evidence that shared reading is a useful tool to enhance bilingual word learning. Vocabulary bridging to the child's strongest language may be a useful way to teach novel words in another language. The findings of the current study suggest that clinicians and teachers may enhance vocabulary instruction by embedding repeated exposures to word definitions within meaningful contexts. Also, clinicians may consider explaining new English words with comprehensible input by providing semantic features and definitions in the child's first language. There is no evidence to suggest that the proposed intervention would in any way slow the process of learning a second language, but instead, would provide additional benefits in language facilitation (Gutierrez-Clellen, 1999).

In order to implement bridging techniques, monolingual educators may need to collaborate with bilingual therapists, parents, and teacher's assistants who speak the child's strongest language. Additional training and professional development may be warranted for support personnel, parents, and teachers to become skilled at providing word meaning expansions in embedded instructional contexts.

Future Research

The findings of this study add to the existing literature on facilitating vocabulary for English language learners. While the intervention was most effective for students with proficiency in one language, additional research is needed to determine evidence-based strategies to use with students who demonstrated limited proficiency in both L1 and L2. It would be interesting to explore additional ways to enhance the saliency of words for the children who did not respond to the intervention, those with limited skills in both languages. These alternative ways may include pairing objects or tangible manipulatives or providing additional instruction during small group activities before and after the shared book reading.

Additional research is needed to further examine factors that influence word learning in relation to second language learning, which include age, receptive vocabulary, phonological awareness, working memory, number of exposures, part of speech, and phonotactic probability. It is not well understood how much the part of speech influenced word learnability. The application of this intervention to teaching other parts of speech, such as verbs or adjectives,

should be explored. Peña, Bedore, and Rappazzo (2003) suggest that younger children learning English typically learn verbs earlier than they learn nouns and other parts of speech. Other studies have shown promising results in teaching pronouns by bridging to the child's first language (Perozzi & Chavez Sanchez, 1992).

It is also recommended that future studies examine the effects of bilingual language interventions on first or second graders to determine the effectiveness of the strategies when utilized with older children. Some of the previous literature suggests that children in the older grades may lose some of their proficiency in their home language when most of the instructional time is in a second language (Anderson, 2004; Shiff-Myers, 1992). Shared reading with vocabulary bridging appears to be a promising intervention that warrants further evaluation with diverse populations.

APPENDIX A. LIST OF BOOKS AND TARGET VOCABULARY

Books	Target Vocabulary
Goldman, D. (1996). *The Three Little Pigs.* Mahwah, New Jersey: WhisleStop.	Straw, Twigs, Wolf, Bricks, Chimney
Rey, M., & Rey, H.A. (1999). *Curious George and the Dump Truck.* Boston: Houghton Mifflin Company.	Window, Ducklings, Gardeners, Wheel, Island
Kirk, D. (2000). *Little Miss Spider at Sunny Patch School.* New York: Scholastic Press.	Ruler, Cricket, Rose, Bee, Spout
Mayer, M. (1990). *Just going to the dentist*. New York: Random House, Inc.	Teeth, Nurse, Braces, Bib, X-rays

APPENDIX B. VOCABULARY DEFINITIONS IN ENGLISH AND SPANISH

English Expansions

Target Word	Semantic Features (3)
Window	• A window is an opening that can let light and air in • You can have windows in your house, your car, and on the bus! You open them to let air in and other things (like bugs) • Windows are made of glass. Sometimes we put curtains around them in the house, but not in cars or trucks
Ducklings	• Ducklings are baby ducks that hatch from an egg and swim in water • Ducklings are small and yellow and have long yellow mouths. • Ducklings follow their Mom wherever she goes.
Gardeners	• Gardeners are people who work in gardens to make them pretty. • Sometimes gardeners use trucks and wheelbarrows to carry the plants and dirt they use • Gardeners plant trees and flowers with soil and dirt.
Wheel	• A wheel is a circle that goes round and round to make things move. • Cars and buses and trucks have 4 wheels with tires. • Wheels are round and black. They're usually made of rubber
Island	• An island is a small piece of land surrounded by water. • Islands sometimes have sand or grass. They also have water all around them • You have to either swim, take a boat, or an airplane to get to an island
Teeth	• Teeth are hard white bones in your mouth. There's a lot of them! • Teeth help you chew food. Animals and people use their teeth to bite and eat. • He said brushing my teeth with a toothbrush was very important.
Nurse	• A nurse is a person who helps the doctor take care of people who are sick. • Nurses work in hospitals and clinics and help you feel better. • Nurses sometimes wear a uniform.
Braces	• Braces are wires that help make your teeth straight. • Mom said the dentist or an orthodontist had to put in the braces only of you needed them. • Braces are made of metal and that would look scary!
Bib	• A bib is a cloth that keeps your clothes from getting stained with food or saliva. • Bibs go around your neck • Babies are the ones that wear bibs 'cause they're messy!
X-rays	• X-rays are pictures of your bones or teeth. • X-rays are black and white and you put them on a light to see them. • X-rays help the doctor know what's wrong or if you have cavities.
Straw	• Straw is made out of dried wheat and is yellow. • Horses and other animals eat straw. • Straw can be used to feed animals and make things.
Twigs	• Twigs are brown sticks from trees. You find them in the yard. • Twigs can be used to make fires. • Twigs come from tree branches that have fallen and don't have any more leaves.

Wolf	• A wolf is a hairy animal that looks like a dog but has sharp teeth and howls at the moon. • A wolf usually has gray fur and growls a lot. • A wolf can be scary. They like to eat other animals!
Bricks	• Bricks are hard, heavy stone blocks. • Bricks can be different colors like red, pink, yellow, and gray. • Bricks are used to build walls and houses. They are very strong.
Chimney	• Chimneys are on the roof of your house- above the fireplace. They're made of bricks or stones. • A chimney is a place for smoke to come out of the fireplace • Smoke comes out of the chimney when a fire is on the fireplace. That's HOT!
Ruler	• A ruler is a long flat stick used to measure things. • Rulers show you how long something is. They can be different sizes and colors. • You can use a ruler to help you draw a straight line.
Cricket	• A cricket is an insect that's green or black that hops or flies. • Crickets sing or make noises. You hear them at night. • Crickets are bugs that snakes and turtles like to eat.
Rose	• A rose is a pretty flower that can be many different colors like red, yellow, or pink. • Roses have a long stem and thorns that can prick you.
Bee	• A bee is a bug with black and yellow stripes that flies. • Bees have a sharp point at its tail that can sting you, "that hurts!" • Bees feed on flowers and make honey.
Spout	• A spout is a pipe with a hole at the end for water to come out. • Liquids like water come out of the spout. • It's what we spiders do, haven't you heard, we climb up a waterspout.

Spanish Expansions

Target Word	Semantic Features (3)
Window	• Un window es una abertura que permite que entre luz y aire. • ¡Puedes tener windows en tu casa, en tu carro y en el autobus! Las abres para dejar que entre viento y otras cosas (como moscas). • Las windows son de crystal. A veces, ponemos cortinas alrededor de ellas en las casas, pero no en los carros ni en los camiones
Ducklings	• Ducklings son patos bebes que se incuban y salen de un huevo y nadan en el agua. • Los ducklings son pequeños y amarillos.¡Sus picos amarillos son bien largos! • Ducklings siguen a su Mamá donde quiera que ella vaya.
Gardeners	• Gardeners son personas que trabajan en jardines para hacer que se vean bonitos. • Gardeners siembran arboles y flores con semillas y tierra. • A veces, gardeners usan camiones o carretillas para llevar las plantas y la tierra que usan.
Wheel	• Un wheel es un círculo que da vueltas y vueltas para que algo se mueva. • George había olvidado que los carros y los autobuses tenían 4 wheels con llantas • Wheels son redondos y negros. Usualmente son hechos de goma.
Island	• Un island es un pedacito de tierra que esta rodeado por agua. • Los islands a veces tienen arena o hierba. Tambien tienen agua por todos sus lados. • Tienes que nadar, tomar un bote o un avión para llegar a un island.
Teeth	• Los teeth son huesos blancos y duros en tu boca. ¡Son muchos! • Tus teeth te ayudan a masticar comida. Los animales y las personas los usan para morder y comer. • Él dijo que cepillar mis teeth con un cepillo era muy importante.
Nurse	• Una nurse es una persona que ayuda al doctor a cuidar personas que estan enfermas. • Las nurses trabajan en hospitales y en clínicas y te ayudan a sentir mejor. • Las nurses a veces usan un uniforme.
Braces	• Braces son alambres que hacen que los dientes se pongan derechitos. • Mamá dijo que el dentista o un ortodoncista era quien ponía braces solo si los necesitaba. • Los braces son de metal y eso se ve extraño y me da un poco de miedo.
Bib	• Un bib es una tela que protege tu ropa de mancharse con comida o saliva. • Los bibs van alrededor de tu cuello. • ¡Yo estaba contento porque los bebes son quienes usan bibs porque ensucian todo!
X-rays	• X-rays son fotografías de tus huesos. • Los X-rays son en blanco y negro y hay que ponerlos sobre una luz para poder verlos. • Los X-rays ayudan a los doctores encontrar que anda mal y si tienes caries.
Straw	• El straw se hace de trigo seco y es amarillo. • Los caballos y otros animals comen straw. • Straw puede ser usado para darle comida a animales o para hacer cosas.
Twigs	• Low twigs son palitos de árboles que son marrones. Los encuentras en el patio. • Los twigs se pueden usar para hacer fogatas.

	• Twigs son ramas de arboles que se han caído y ya no tienen hojas.
Wolf	• Un wolf es un animal peludo que parece un perro pero tiene dientes bien afilados y le aúlla a la luna. • Un wolf usualmente tiene piel gris y gruñe mucho. • Un wolf puede dar miedo. A ellos les gusta comer otros animals.
Bricks	• Los bricks son bloques duros y pesados de piedra. • Los bricks pueden ser de diferentes colores como rojo, rosa, amarillo o gris. • Los bricks se usan para construir paredes o casas. Son robustos.
Chimney	• Los chimneys estan en el techo de las casas- encima del fogón. Son hechas de piedra o rocas. • Un chimney es un espacio para que el humo salga del fogón • Cuando el fogón esta prendido, sale humo por el chimney. ¡Eso esta caliente!
Ruler	• Una ruler es un palo largo y flaco que se usa para medir cosas. • Las rulers te enseñan cuán largo es algo. Pueden ser de diferentes tamaños y colores. • Puedes usar un ruler para dibujar una linea derecha.
Cricket	• Un cricket es un insecto que es verde o negro y salta o vuela. • Los crickets cantan o hacen ruidos. Los escuchas cuando es de noche. • A las culebras y a las tortugas les gusta comer gazapos como los crickets.
Rose	• Una rose es una flor bien bonita que puede ser de muchos colores diferentes como rojo, amarillo, o rosita. • Roses tienen un tallo largo que te puede picar.
Bee	• Un bee es un insecto que tiene rallas negras y amarillas y vuela. • Las bees tienen una punta afilada en sus colas que te pueden picar, “eso duele!” • Las bees se alimentan con las flores y hacen miel.
Spout	• Un spout es un tubo largo con una abertura al final para que salga agua. • Líquidos como agua salen del spout. • “Es lo que nosotras las arena hacemos, ¿no has escuchado? Nosotras escalamos por el waterspout,”

APPENDIX C: COUNTERBALANCED INTERVENTION ORDER

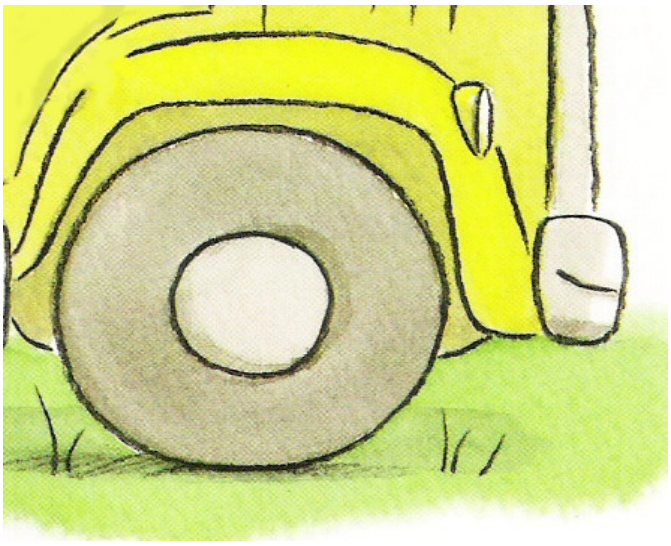
	Order of Book Presentation				*n*
Group 1	Book C - E	Book B - S	Book A – S	Book D - E	6
Group 2	Book C - S	Book B - E	Book A - E	Book D – S	5
Group 3	Book A - S	Book D - E	Book C - E	Book B - S	5
Group 4	Book A - E	Book D - S	Book C - S	Book B - E	2
Group 5	Book A - E	Book D - E	Book C - S	Book B - S	3
Group 6	Book A - S	Book D - S	Book C - E	Book B - E	2

*Note E = English, S = Spanish

Book A = Curious George and the Dump Truck (Rey & Rey, 1999)
Book B = The Three Little Pigs (Goldman, 1996)
Book C = Just going to the Dentist (Mayer, 1990)
Book D = Little Miss Spider at Sunny Patch School (Kirk, 2000)

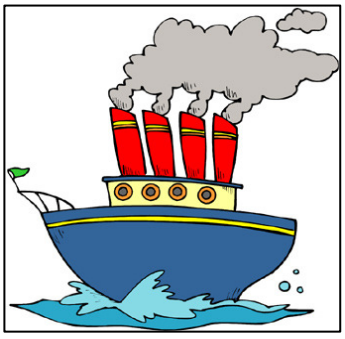
APPENDIX D: RESEARCHER-MADE MEASURES EXAMPLES

Expressive Probe Example: “Wheel”



Prompt: “What is this?” and “Tell me something that you know about this.”

Receptive Probe Example: “wheel”



Prompt: “Point to wheel.”

APPENDIX E: EXPRESSIVE RESEARCHER-MADE VOCABULARY DEFINITIONS SCORING SCHEME

Points	Criterion	Examples of Possible Responses
0	*No Knowledge* • No response • Response of "I don't know" or shrug of shoulders • Inappropriate Definition • Definition of Homophone • Mentions only features in the book (parts of the story) • Only says the word in Spanish	• Teeth • Television • Lobo • Puede hacer que se tumben casas (wolf) • Dog (wolf) • They can spill you • If you throw away it go, walk (wheel) • It runs (wheel) • Tiene una bolita que parece un huevo (wheel)
1	*Emergent Knowledge* • Vague, imprecise, or partial definition • Example of word in context (but does not define meaning) • A description with *1* example or attribute of the word or item/person/object within word category	• Para agarrar comida (teeth) • Comen puercos (wolf) • Take a picture (x-ray) • They scratch you (bee) • Quiere picar a una persona (bee) • Lo quieres poner en la tronka (wheel) • Paran (wheel) • Quiere comer animals (wolf)
2	*Partial/Incomplete Knowledge* • 2 or more different attributes of the word or item/person/object within word category • Unambiguous synonym alone or used in context which defines meaning • A description with *more than 1* example or attribute of the word or item/person/object within word category	• Que anda volando y te puede picar aqui (bee) • The picture of the teeth; lo pone en la luz pa' que se vea (x-ray) • They eat, they run, they can jump (wolf) • Circle, when somebody drive, it move (wheel) • Lo tienen los carros; caminan (wheel) • Se abre y se cierra; entran las moscas (window) • Patitos babies; viven en el agua (ducklings)
3	*Complete Knowledge* • Complete and precise definition • At least 2 or more descriptors • Narrows the possibility of confusing the target word with any other word	• A bug with black and yellow stripes that has a sharp point and can sting you; it makes honey (bee) • Flor, tiene espinas, te pican las espinas, puedes poner en agua (rose) • Trees, little ones; se caen; ya no tienen leaves (sticks)

Additional Guidelines:

- When in doubt between a higher and a lower score (0 and 1), use the higher score if the child provided additional context and the lower score if no context was given.
- If the child provides multiple utterances, use a higher score if they provide different attributes of the word and use a lower score if they provided with very long descriptions of a single attribute.

Florida State
UNIVERSITY
Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8633 · FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 6/8/2006

To:
Mirza Lugo-Neris
Mc 1200

Dept.: **COMMUNICATION DISORDERS**

From: **Thomas L. Jacobson, Chair**

Re: **Use of Human Subjects in Research**
Facilitating English Vocabulary Acquisition of Spanish-English Bilingual Pre-schoolers

The forms that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Human Subjects Committee at its meeting on **5/10/2006**. Your project was approved by the Committee.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals which may be required.

If the project has not been completed by **5/9/2007** you must request renewed approval for continuation of the project.

You are advised that any change in protocol in this project must be approved by resubmission of the project to the Committee for approval. The principal investigator must promptly report, in writing, any unexpected problems causing risks to research subjects or others.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols of such investigations as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Protection from Research Risks. The Assurance Number is IRB00000446.

cc: Carla Wood Jackson
HSC No. 2006.0416

INFORMED CONSENT FORM

This research is being conducted by Mirza J. Lugo-Neris, B.S., who is a Graduate Student in Speech-Language Pathology at Florida State University under the direct supervision of Dr. Carla W. Jackson, Assistant Professor of Communication Disorders. I understand the purpose of their research project is to study word learning strategies for children who are bilingual.

If I provide consent, I understand that my child will participate in speech-language assessments and twelve 30 minute intervention sessions over 4 weeks at no cost to me. If selected to participate in the study, the time commitment for participation is approximately 360 minutes for intervention over 12 sessions, along with 3 hours of assessment prior to the intervention and 1 hour after the 4 weeks of intervention. During the intervention sessions, my child will participate in storybook readings and will be taught new vocabulary words and their definitions. During assessment sessions, supervised graduate students will evaluate my child's language and literacy skills using common assessments of vocabulary, grammar, nonverbal IQ, and early literacy skills. I understand that I will receive evaluation reports and printed information about my child's performance and progress upon request. I may be asked to provide the results of my child's most recent audiological evaluation.

I understand my child's participation is completely voluntary and he/she may take a break or stop participation at anytime. My child's participation and responses will be kept confidential to the extent allowed by the law. The name of my child or family members will not appear on any of the results. Individual responses will not be reported with any identifying information.

I understand that there are potential benefits for participating in this research project. My child may experience gains in English vocabulary knowledge and phonological awareness skills. The results will provide professionals with valuable information about the effectiveness of this intervention program for improving language and literacy skills.

I understand that my child will be tape recorded and/or videotaped by the researcher. These tapes will be kept by the researcher in a locked filing cabinet in the Child Language Laboratory of the Regional Rehabilitation of Florida State University (Room 312). I understand that only the researcher will have access to these tapes and that they will be destroyed by May 17, 2012.

While no risk is anticipated, my child may become fatigued and can take a break or discontinue at any time. I understand that this consent may be withdrawn at any time without penalty.

I understand that I may contact Mirza Lugo-Neris (787-510-0370) and Carla Wood Jackson (850-645-6567) at Florida State University, Communication Disorders 413 Regional Rehabilitation Center, for answers to questions about this research or my rights. Group results will be sent to me upon my request.

I give consent for my child _____to participate in the above study, "Facilitating English Vocabulary Acquisition of Spanish-English Bilingual Preschoolers."

_____ _____
Parent's Signature Date

_____
Printed Name

_____ _____
Phone Number Email address

If you have any questions about your rights as a participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Committee, Institutional Review Board, through the Vice President for the Office of Research at (850) 644-8633.

HOJA DE CONSENTIMIENTO INFORMADO

Esta investigación esta siendo conducida por Mirza J. Lugo-Neris una estudiante de Maestría en Patología del Habla-Lenguaje bajo la supervisión de la Dra. Carla W. Jackson, Profesora Asistente en Florida State University. Yo entiendo que el propósito de este proyecto de investigación es examinar cómo niños bilingües aprenden vocabulario nuevo.

Si decido ofrecer mi consentimiento, entiendo que mi niño(a) recibirá evaluaciones del habla-lenguaje. Su participación supondrá de 12 visitas que se llevarán acabo durante 4 semanas gratuitamente. Cada una de estas visitas tendrá una duración de 30 minutos. Si mi niño(a) es seleccionado para participar en la investigación, el tiempo total de compromiso será de 360 minutos para las visitas de intervención y, en adición, unas 4 horas de evaluaciones. Durante las sesiones de intervención, le leerán un cuento a mi niño (a) y le enseñarán palabras de vocabulario. Durante las sesiones de evaluación, estudiantes de Maestría darán pruebas de lenguaje y de alfabetización usando exámenes comunes de vocabulario, gramática, inteligencia no-verbal, y destrezas de alfabetización temprana. Yo entiendo que recibiré informes sobre las evaluaciones e información impresa sobre los trabajos que complete mi niño(a) y sus mejoras. También entiendo que los investigadores podrán pedirme una copia de la evaluación audiológica mas reciente de mi niño(a).

Yo entiendo que la participación de mi niño (a) es completamente voluntaria y el/ella podrá tomar descansos o detener su participación en cualquier momento. Toda información sobre mi niño(a) será confidencial excepto cuando la ley lo exija. El nombre de mi niño (a) o de sus familiares no aparecerá en los resultados de la investigación.

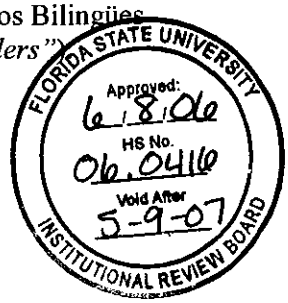
Yo entiendo que podría haber ciertos beneficios directos al participar en esta investigación. Mi niño (a) podría experimentar mejoras en su vocabulario en Inglés y en sus destrezas tempranas de alfabetización. Los resultados de la investigación podrán proveerle información vital a profesionales sobre la efectividad de este programa de intervención para mejorar destrezas de lenguaje y alfabetización.

Entiendo que mi niño (a) podrá ser grabado en vídeo o audio por el investigador. Estas cintas serán guardadas bajo llave en el laboratorio del investigador en el edificio "Regional Rehabilitation Center" de "Florida State University (salón no. 312). Entiendo que solamente el investigador tendrá acceso a las cintas y serán destruidas en o antes del 17 de mayo de 2012.

Aunque no haya ningún riesgo asociado con participar en esta investigación, si mi niño(a) experiencia fatiga, podrá tomar un descanso o detener su participación en cualquier momento sin penalidad.

Entiendo que puedo contactar a Mirza Lugo-Neris (787-510-0370) o a la Dra. Carla W. Jackson (850-645-6567) a la siguiente dirección, Florida State University, Communication Disorders 413 Regional Rehabilitation Center, si tengo alguna pregunta sobre esta investigación o mis derechos. Los resultados del grupo me serán enviados si los solicito.

Doy consentimiento a que mi niño (a) _____ participe en la investigación descrita anteriormente, "Facilitando Destrezas de Vocabulario en Inglés con Niños Bilingües de edad Preescolar" (*"Facilitating English Vocabulary of Spanish-English Bilingual Preschoolers"*).



_____ _____

Firma del padre o encargado Fecha

_____

Nombre (en letra de molde)

_____ _____

Número de Teléfono Dirección de Correo Electrónico (si tiene)

Si tiene alguna pregunta sobre sus derechos como participante de esta investigación, o si entiende que ha sido expuesto a algún riesgo, puede comunicarse con el Director del *Human Subjects Committee, Internal Review Board*, a través del Vise-Presidente de la Oficina de Investigaciones al (850) 644-8633.

REFERENCES

Anderson, R. (2004). First language loss in Spanish-speaking children: Patterns of loss and implications for clinical practice. In B. Goldstein (Ed.(, *Bilingual language development and disorders in Spanish-English speakers* (pp. 187-211). Baltimore: Paul H. Brookes.

Baker, S.K., Simmons, D.C., & Kame'enui, E.J. (1995). *Vocabulary acquisition: Synthesis of the research*. (Tech. Rep. No. 13). Eugene: University of Oregon, National Center to Improve the Tools of Educators.

Bates, E., Bretheron, I., & Snyder, I. (1998). *From first words to grammar.* New York: Academic Press.

Baumann, J. F., & Kameenui, E. J. (1991). Research on vocabulary instruction: Ode to Voltaire. In J. Flood, J. J. D. Lapp, & J. R. Squire (Eds.), *Handbook of research on teaching the English language arts* (pp. 604-632). New York: MacMillan.

Becker, W. C. (1977). Teaching reading and language to the disadvantaged: What we have learned from field research. Harvard Educational Review, 47, 518-543.

Bedore, L. M., & Leonard, L. B. (2000). Effects of inflectional variation on fast mapping of verbs in English and Spanish, *Journal of Speech, Language, Hearing Research, 43,* 21-33.

Bedore, L. M., Peña, E. D., García, M., & Cortez, C. (2005). Conceptual versus monolingual scoring: When does it make a difference? *Language, Speech, and Hearing Services in Schools, 36*, 188-200.

Benedict, H. (1979). Early lexical development: Comprehension and production. *Journal of Child Language, 6*, 183-200.

Biemiller, A. & Slonim, N. (2001). Estimating root word vocabulary growth in normative and advantaged populations: Evidence for a common sequence of vocabulary acquisition. Journal of Educational Psychology, 93, 498-520.

Biemiller, A. (2003). Teaching vocabulary in the primary grades: Vocabulary instruction needed. In J. F. Baumann & E. J. Kame'enui (Eds.), *Vocabulary instruction: Research to practice* (pp. 28-40). New York: Guilford.

Bird, J., Bishop, D. V. M., & Freeman, N. H. (1995). Phonological awareness and literacy development in children with expressive phonological impairments. *Journal of Speech and Hearing Research, 38*, 446-462.

Bishop, D., & Adams, C. (1990). A prospective study of the relationship between specific language impairment, phonological disorders, and reading retardation. *Journal of Child Psychology and Psychiatry, 21*, 1027-1050.

Brett, A., Rothlein, L. & Hurley, M. (1996). Vocabulary acquisition from listening to stories and explanations of target words. *Elementary School Journal,* 9, 415-422.

Brownell, R. (2000). *The expressive one-word picture vocabulary test—Spanish bilingual version (EOWPVT-SBE).* Novato, CA: Academic Therapy.

Bruck, M. (1982). Language impaired children's performance in an additive bilingual education program. *Applied Psycholinguistics, 3*, 45-60.

Bruck, M. (1984). Early bilingualism and language acquisition. In M. Paradis & Y. Lebrun (Eds.), *Early bilingualism and child development* (pp. 69-94). Lisse, Holland: Swets & Zeitlinger, B.V.

Catts, H. W. (1993). The relationship between speech-language impairments and reading disabilities. *Journal of Speech and Hearing Research,36*, 948-958.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.) Hillsdale, NJ: Erlbaum.

Coyne, M. D., Kame'enui, E. J. & Simmons, D. C. (2001). Prevention and intervention in beginning reading: Two complex systems. *Learning Disabilities Research & Practice,* 16, 62-72.

Coyne, M. D., McCoach, B., Kapp, S. (2007). Vocabulary intervention for kindergarten students: Comparing extended instruction to embedded instruction and incidental exposure. L*earning Disabilities Quarterly, 30*, 74-88.

Coyne, M.D, Simmons, D.C., Kame'enui, E. J., & Stoolmiller, M. (2004). Teaching vocabulary during shared storybook readings: An examination of differential effects. *Exceptionality, 12*, 145-162.

Cummins, J. (1979). Linguistic interdependence and the educational development of bilingual children. *Review of Educational Research, 49*, 222-251.

Cummins, J. (1981). The role of primary language development in promoting educational success for language minority students. In *Schooling and language minority students: A theoretical framework*. Sacramento: California State Department of Education.

Cummins, J. (1984). *Bilingualism and special education: Issues in assessment and pedagogy*. San Diego: College-Hill.

Cunningham, A. E. & Stanovich, K. E. (1998). What reading does for the mind. *American Educator*, 22, 8-15.

DeAvila, E. A., & Duncan, S. E. (2003). *Pre-School Language Assessment Scale 2000 – Spanish.* Monterey, CA: CTB/McGraw-Hill.

Díaz-Rico, L.T., & Weed, K.Z. (2002). *The Crosscultural, Language, and Academic Development Handbook: A Complete K-12 Reference Guide.* Boston: Allyn-Bacon.

Diener, M., Wright, C., Julian, J., & Bylington, C. (2003). A pediatric literacy education program for low socioeconomic, culturally diverse families. *Journal of Research in Childhood Education*, 18(2), 149-159.

Dollaghan, C. A. (1987). Fast mapping in normal and language-impaired children. *Journal of Speech and Hearing Disorders, 52*, 218-222.

Duncan, S.E., & DeAvila, E. A. (2003). *Pre-School Language Assessment Scale 2000 - English.* Monterey, CA: CTB/McGraw-Hill.

Dunn, L., & Dunn, L. (1997). *The Peabody Picture Vocabulary Test III (PPVT-III)*. Circle Pines, MN: American Guidance Service.

Dunn, L., Padilla, E., Lugo, D., & Dunn, L. (1986). *Test de Vocabulario en Imágenes Peabody*. Cirple Pines, MN: American Guidance Service.

Elley, W. B. (1989). Vocabulary acquisition from listening to stories. *Reading Research Quarterly*, 24, 174-187.

Feitelson, D., & Goldstein, Z. (1986). Patterns of book ownership and reading to young children in Israeli school-oriented and nonschool-oriented families. *Reading Teacher, 39*, 924-930.

Goldstein, B. (2006). Clinical implications of research on language development and disorders in bilingual children. *Topics in Language Disorders, 26*, 305-321.

Gutierrez-Clellen, V. F. (1999). Language choice in intervention with bilingual children. *American Journal of Speech-Language Pathology, 8*, 291-302.

Hoff, E. (2005). *Language Development*. Belmont, CA: Wadsworth.

International Reading Association. (2001). *Second-language literacy instruction: A position statement of the International Reading Association.* Retrieved April 20, 2006, from http://www.reading.org/downloads/positions/ps1046_second_language.pdf.

Justice, L. M., & Ezell, H. K. (2001). Written language awareness in preschool children from low-income households: A descriptive analysis. *Communication Disorders Quarterly, 22*, 123-134.

Justice, L. M., Meier, J., & Walpole, S. (2005). Learning new words from storybooks: An efficacy study with at-risk kindergartners. *Language, Speech, and Hearing Services in Schools, 36*, 17-32.

Kayser, H. (1995). Intervention with children from linguistically and culturally diverse backgrounds. In M. E. Fey, J. Windsor, & S.F. Warren (Eds.), *Language intervention: Preschool through the elementary years* (pp. 315-332). Baltimore: Paul H. Brookes.

Kindler, A.L. (2001). *Survey of the States' Limited English Proficient Students & Available. Educational Programs and Services, 2000-2001.* Retrieved April 20, 2006, from http://www.ncela.gwu.edu/policy/states/reports/seareports/0001/sea0001.pdf.

Krashen, S. (1985). The input hypothesis.: Issues and implications. London: Longman.

Lonigan, C. J., Bloomfield, B. G., Anthony, J. L., Bacon, K. D., Phillips, B. M., & Samwel, C. S. (1999). Relations among emergent literacy skills, behavior problems, and social competence in preschool children from low- and middle-income backgrounds. *Topics in Early Childhood Special Education, 19*, 40-53.

Magnusson, E., & Naucler, K. (1990). Reading and spelling in language disordered children – linguistic awareness in language-disordered children. *First Language, 13*, 93-111.

Nagy, W. E., & Herman, P. A. (1987). Breadth and depth of vocabulary knowledge: Implications for acquisition and instruction. In M. G. McKeown & M. E. Curtis (Eds.), *The nature of vocabulary acquisition* (pp. 19-36). Hillsdale, NJ: Erlbaum.

National Center for Educational Statistics (NCES). (2004). *Percentage distribution of public school students enrolled in kindergarten through 12th grade, by race/ethnicity: Fall 1972–2003*. Retrieved April 20, 2006, from http://nces.ed.gov/.

National Reading Panel. (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction: Reports of the subgroups.* Bethesda, MD: National Institute of Child Health and Human Development.

No Child Left Behind Act of 2001, Pub. L. No. 107-110.

Oetting, J. B., Rice, M. L., & Swank, L. K., (1995). Quick incidental learning (QUIL) of words by school-age children with and without SLI. *Journal of Speech and Hearing Research, 38*, 434-445.

Ordónez, C. L., Carlo, M. S., Snow, C. E., & McLaughlin, B. (2002). Depth and breadth of vocabulary in two languages: Which vocabulary skills transfer? *Journal of Educational Psychology, 94*, 719– 728.

Patterson, J. L. & Pearson, B. Z. (2004). Bilingual lexical development: Influences, contexts, and processes. In B. A. Goldstein (ed.), *Bilingual language development and disorders in Spanish–English speakers*, pp. 77–104. Baltimore: Paul H. Brookes.

Paul, P. V., & O'Rourke, J. P. (1988). Multimeaning words and reading comprehension: Implications for special education students. *Remedial and Special Education*, *9* (3), 42-52.

Penno, J. F., Wilkinson, I. A. G. & Moore, D. W. (2002). Vocabulary acquisition from teacher explanation and repeated listening to stories: Do they overcome the Matthew effect. *Journal of Educational Psychology*, *94*, 23-33.

Peña, E., Bedore, L. M., & Rappazzo, C. (2003). Comparison of Spanish, English, and bilingual children's performance across semantic tasks. *Language, Speech, and Hearing Services in Schools, 34*, 5-16.

Perozzi, J.A. (1985). A pilot study of language facilitation for bilingual language handicapped children: Theoretical and intervention implications. *Journal of Speech and Hearing Disorders, 50*, 403-406.

Perozzi, J.A., & Chavez Sanchez, M. L. (1992). The effect of instruction in L1 on receptive acquisition of L2 for bilingual children with language delay. *Language, Speech, and Hearing Services in Schools, 23*, 348-352.

Poulisse, N. (1997). Language production in bilinguals. In A. de Groot &J. Kroll (Eds.), *Tutorials in bilingualism: Psycholinguistic perspectives* (pp. 201-224). Mahwah, NJ: Erlbaum.

Rhode, A. & Tiefenthal, C. (2000). Aspects of lexical acquisition: Fast mapping in early L2 acquisition. *Studia Linguistica, 54*, 167-174.

Rice, M. L., Buhr, J. C., & Nemeth, M. (1990). Fast mapping word-learning abilities of language-delayed preschoolers. *Journal of Speech and Hearing Disorders, 55*, 33-42.

Rimm-Kautman, S. E. & Pianta, R. C. (2000). An ecological perspective on the transition to kindergarten: A theoretical framework to guide empirical research. *Journal of Applied Developmental Psychology.,* 21, 491-511.

Roth, F. (2002). Vocabulary instruction for young children with language impairments. *Perspectives on Language Learning and Education.,* 9, 3-7.

Ryan, A. M. (2005). The effectiveness of the Manchester Even Start Program in improving literacy outcomes for Preschool Latino students. *Journal of Research in Childhood Education, 20*, 15-26.

Scarborough, H. S. (1998). Prediction of reading disability from familial and individual differences. *Journal of Educational Psychology,* 81, 101-108.

Schiff-Myers, N. B. (1992).Considering the arrested language development and language loss in the assessment of second language learners. *Language, Speech, and Hearing Services in Schools, 23*, 28-33.

Schrank, F. A., Fletcher, T. V., & Alvarado, C. G. (1996). Comparative validity of three English oral language proficiency tests. *The Bilingual Research Journal, 20*, 55-68.

Snow, C. E., Burns, M. S., & Griffin, P. (1998). Preventing reading difficulties in young children. Washington, DC: National Academy Press.

Stanovich, K. E. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly*, *21* , 360-406.

Storch, S. A. & Whitehurst, G. J. (2002). Oral language and code-related precursors to reading: Evidence from a longitudinal structural model. *Developmental Psychology,* 38, 934-947.

Ulanoff, S. H., & Pucci, S. L. (1999). Learning words from books: the effects of read aloud on second language vocabulary acquisition. *Bilingual Research Journal, 23*, 319-332.

U.S. Bureau of the Census. (2000). *Languages spoken at home.* Retrieved April 20, 2006, from http://www.census.gov/.

U.S. Department of Education. (2001). *23rd annual report to Congress on the implementation of IDEA*. Washington, DC.

Vaughn, S., Linan-Thompson, S., Pollard-Durodola, S. D., Mathes, P. G., & Hagan, E.C. (2006). Effective interventions for English language learners (Spanish-English) at risk for reading difficulties. In D. K. Dickinson & S. B. Neuman (Eds.), *Handbook of early literacy research vol. 2*. New York: Guilford Press.

Vernon Feagans, L., Scheffner Hammer, C., Miccio, A., & Manlove, E. (2002). Early language and literacy skills in low-income Arican Amerian and Hispanic children. In S.B. Neuman & D.K. Dickinson (Eds.). *Handbook of Early Intervention Research* (pp. 192-210). New York: The Guildford Press.

Whitehurst, G. J., Epstein, J. N., Angell, A. L., Payne, A. C., Crone, D. A., & Fischel, J. E. (1994). Outcomes of an emergent literacy intervention in Head Start. *Journal of Educational Psychology, 86*, 542-555.

Whitehurst, G.J., & Lonigan, C.J. (1998). Child development and emergent literacy. *Child Development, 68*, 848-872.

Wiig, E. H., Secord, W. A., & Semel, E. (2003). Clinical evaluation of language fundamentals, fourth edition Spanish (CELF-4). Toronto, Canada: The Psychological Corporation/A Harcourt Assessment Company.

Zimmerman, Steiner & Pond (2002). *Spanish Preschool Language Scales – Fourth Edition*. The Psychological Corporation: Harcourt Assessment Company.

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