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The Cross-linguistic Effects of Dialogic Reading on Young Dual Language Learners

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THE CROSS-LINGUISTIC EFFECTS OF DIALOGIC READING ON YOUNG
ENGLISH LANGUAGE LEARNERS

A Dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy at Virginia Commonwealth University

by

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Abstract

THE CROSSLINGUISTIC EFFECTS OF DIALOGIC READING ON YOUNG ENGLISH LANGUAGE LEARNERS

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University

By Mary Ellen Huennekens

Virginia Commonwealth University, 2012

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Early Childhood Special Education, School of Education

English fluency is a strong predictor of later academic success in the U.S. (Espinosa, 2007) In fact, a child who enters kindergarten with weak English language skills is most at risk for academic failure and dropping out of school; while a child with strong home language (L1) skills is more likely to attain fluency in English (Espinosa, 2007). A large portion of young English learners are acquiring their first and second languages at the same time. It is important to young dual language learners (DLL) that research reveals the best ways to provide effective instruction which helps maintain the home language and supports acquisition of English. This study examined the effects of an early reading intervention on preschool-age DLL children's early literacy skills.

Phonological awareness and alphabet knowledge have been identified as skills that can transfer from L1 to English (L2) to enhance the acquisition of the second language among young children (Dickinson, 2004; Durgunoglu, Nagy, & Hancin-Bhatt, 1993).

There is evidence of the effectiveness of shared-reading interventions to increase children's oral language skills across languages, race/ethnicity, and SES. The current study embedded instruction in phonological awareness and alphabet knowledge in a group of interactive reading strategies known as Dialogic Reading (DR). The intervention was delivered in the children's home language, Spanish. Children's growth in emergent literacy skills in Spanish and in English was monitored using a single subject with multiple baselines across subjects design. Visual analysis of single subject graphs indicated gains across all participants. In addition, paired-samples t-tests showed significant growth between pre- and post-tests in both English and Spanish of participating children. The findings have implications for research, policy, professional practice, and home literacy practices.

CHAPTER 1

Introduction

Background

The United States has a large and fast growing ethnic, linguistic, and culturally diverse population. The demographic shift over the last decade is particularly noteworthy among young children. Abedi, Hofstetter, and Lord (2004) reported more than two million children in pre-K through third grade speak a language other than English in their homes. Hispanic children under the age of five years are the fastest growing racial/ethnic group in the U. S. In July 2003, they numbered 4.2 million or 21% of the total demographic of 19.8 million children (National Clearinghouse for English Language Acquisition [NCELA], 2008). These statistics present serious implications for schools in terms of education policy and practice related to early intervention, assessment and special education placement, mono/bilingual education, and overall academic achievement. The National Assessment of Educational Progress (NAEP) reports that nine-year-old Hispanic students lagged behind their non-Hispanic White peers by 13% (28 points) in 1975; and the gap did not decrease from 1975 to 1999 (Rampey, Dion, & Donahue, 2009). Moreover, Hispanic students also have higher retention in grade and suspension/expulsion rates than their peers. The drop-out rate is twice that of African-Americans and four times the rate of non-Hispanic Whites (Rampey, et al. (2009).

Brief Review of Literature

Skills

“The developmental origins of a large component of children's reading skills in kindergarten and first grade can be found in the preschool period” (Lonigan, Burgess, & Anthony, 2000). The National Early Literacy Panel synthesized research on early literacy skills and instructional strategies. The report, issued in 2008, addressed the skills and abilities of young children (0-5 years) which predict later outcomes of conventional literacy. Having defined the skills, the panel looked at interventions and instructional strategies that contributed to gains in those areas. Further, they analyzed the environments in which the instruction was delivered, and the characteristics of children participating in the studies.

The panel defined early literacy skills as those skills or abilities which are present before and predictive of conventional literacy skills (NELP, 2008). Thus, they meet two criteria for a causal relationship: temporal precedence and covariation. There are six variables found to have consistently strong and predictive relationships to later literacy outcomes. They are: (1)alphabet knowledge (AK), (2) phonological awareness (PA), (3) rapid automatic naming (RAN) of letters or digits, (4) RAN of objects or colors, (5) name writing, and (6) phonological short-term memory (PA –STM). The panel found that PA, AK, and PA-STM are the most important variables for predicting later outcomes of conventional literacy. Secondary analysis revealed that the relationships remained

significant after controlling for demographic characteristics such as socio/economic status (SES) or IQ.

Interventions

To analyze effective interventions and instructional strategies, the panel considered three areas: code-focused instructional strategies, shared-reading interventions, and parent and home programs. Code-focused instructional strategies provide explicit teaching experiences in PA, phonics, alphabet knowledge, or print awareness. Shared-reading storybook interventions focused on parents or teachers as facilitators in the home or classroom. Home programs used parents as facilitators of a variety of interventions designed to increase literacy activities in the home.

Explicit instruction of code-related skills resulted in moderate to large effects on measures of early literacy such as PA and AK. Phonological awareness emerged as the area most significantly affected by direct instruction. In fact, children in these studies scored 0.82 of a standard deviation higher on measures of PA than the comparison groups (NELP).

The shared-reading studies included in this report provided either a substantial increase in reading experiences or a change in the style of shared-reading. Findings of the NELP report indicate shared-reading has a significant positive effect on young children's oral language skills. Roberts, Jergens, and Burchinal (2005) found that a global measure of home literacy, including frequency of shared-reading, was a strong predictor of child outcomes on measures of receptive and expressive language. Additionally, when Head Start teachers used specific interactive reading strategies in

their classrooms, children scored significantly higher on measures of expressive and receptive language than their peers in the comparison groups (Wasik, Bond, & Hindeman, 2006). A number of studies have used specific interactive reading strategies called Dialogic Reading (DR) as the intervention to enhance young children's early language skills.

Dialogic Reading

Dialogic Reading (DR) is a group of interactive reading strategies that promote children's language development through scaffolding and extension of children's comments by the adult reader. The strategies have been shown to support the development of children's oral language and early literacy skills. Researchers employing DR strategies have reported significant positive results in oral language development in the home language (L1) among children from middle and low SES conditions, children who have language delays, and children who speak home languages other than English (Crain-Thoreson & Dale, 1999; Lonigan & Whitehurst, 1998; Valdez-Manchaca & Whitehurst, 1992; Whitehurst, et al., 1988).

Transfer of Skills

There are several theories of second language acquisition among young children. The most commonly held is the theory of transfer of skills. Cummins (1996) suggested that "common underlying proficiencies" (p. 250) in language may exist such that skills in the first language (L1) will mediate acquisition of a second language. The *cross-linguistic transfer* of skills may be conceptualized as "the access and use of linguistic resources in L1 by students while learning other languages" (Leafstadt & Gerber, p. 27). Many other

studies link the development of first language (L1) skills to the acquisition of a second language (L2; English) among preschool-age children (Cardenas-Hagan, Carlson, & Pollard-Durodola, 2007; Dickinson, McCabe, Clark-Chiarelli, & Wolf, 2004). Specifically, phonological awareness, syntactic comprehension, and letter name and sound knowledge in the home language have been shown to enhance second language acquisition in young children. Dickinson, et al. (2004) investigated the relationship between phonological awareness (PA) and bilingualism. Initial scores on PA in one language corresponded to similar scores in the other language. In fact, the strongest predictor of PA in the spring in one language was the child's level of PA in the fall in the other language.

Overview of Study

The current study examined a reading intervention intended to increase early language skills that are known to transfer from L1 to L2. Dialogic Reading (DR) was developed to affect children's oral language skills. There is a significant body of research showing that DR has significant positive effects on children's receptive and expressive vocabulary, mean length of utterance (MLU), and frequency of utterance (Blom-Hoffman, et al., 2006; Crain-Thoreson & Dale, 1999; Valdez-Menchaca & Whitehurst, 1992; Whitehurst, et al., 1988; Whitehurst & Lonigan, 1998). This study examined the effects of DR on skills that transfer from L1 to L2, specifically, phonological awareness and alphabet knowledge. Young Spanish-speaking ELLs participated in a reading intervention in their home language facilitated by bilingual Spanish-English research assistants. Growth in early literacy skills was assessed

following each reading session and results were monitored using a single subject with multiple baselines design. Pre- and post tests of emergent literacy skills were administered in Spanish and English. The results have the potential to inform practice, policy, and future research.

Rationale for Study

This study examined the effects of an early reading intervention on preschool-age DLL children's early literacy skills. English fluency is a strong predictor of later academic success (Espinosa, 2007). In fact, a child who enters kindergarten with weak English language skills is most at risk for academic failure and dropping out of school; however, a child with strong L1 skills is more likely to attain fluency in English (Espinosa, 2007). Phonological awareness and alphabet knowledge have been identified as skills that can transfer from L1 to L2 to enhance the acquisition of the second language among young children (Dickinson, 2004; Durgunoglu, Nagy, & Hancin-Bhatt, 1993). There is evidence of the effectiveness of shared-reading interventions such as dialogic reading to increase children's oral language skills across languages, race/ethnicity, and SES; but research does not support the cross-linguistic transfer of oral language skills.

Additionally, young ELLs are disproportionately represented in special education programs. ELLs manifest language and academic gaps that may be mistaken for language and speech delays and/or learning disability. Cummins developed the theory of Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP) wherein a child may become proficient in social language without developing competence in receptive or expressive academic language or CALP

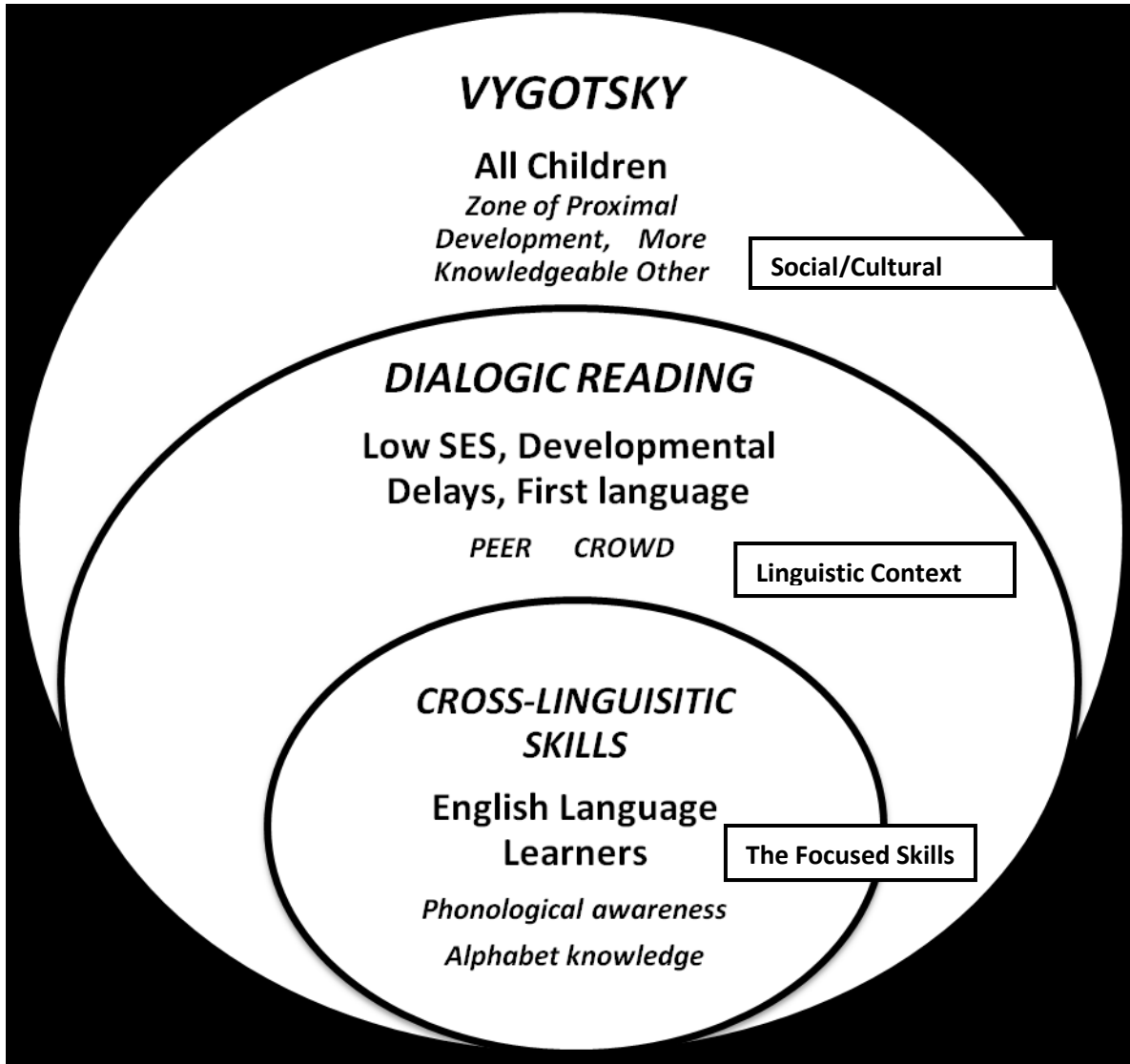
(Cummins, 2003). Children may appear to have a high degree of fluency while interacting with peers and teachers in social situations, but they may not have mastered the specialized decontextualized language of the classroom. They may comprehend and express understanding for concepts in the home language, but lack the language skills to express these concepts in the academic register of the second language. Teachers may misinterpret their struggle as learning delays or language impairments and recommend them for special education testing. As a result, this group often is over-represented in special education programs. Effective early language interventions along with culturally/linguistically appropriate assessments are necessary to help prevent the disproportionate placement of DLLs in special education programs.

Theoretical Framework

Vygotsky's Social Development Theory of Learning states that social interaction and culture can significantly impact cognitive development (Vygotsky, 1976). Language development, in particular, is a social process mediated by a more knowledgeable adult (Vygotsky, 1962). Shared book-reading, a socially-mediated intervention, has been shown to be effective at developing early language skills which are linked to later success in reading and other academic areas (Bus, van IJzendoorn, & Pellegrini, 1995; Crain-Thoreson & Dale, 1992; Debaryshe, 1993). One effective reading practice, Dialogic Reading (DR; Whitehurst, et al, 1988), is a socially-mediated and highly contextual interactive reading experience which has been identified as an evidence-based emergent literacy intervention (Justice & Pullen, 2003). As Vygotsky's theory would suggest, DR has been effective as a means of developing oral language and vocabulary (Whitehurst, et

al, 1988; 1994). Metalinguistic skills such as phonological awareness and alphabet knowledge have been shown to support the development of later conventional literacy skills (Bryant, MacLean, & Bradley, 1990; Burgess & Lonigan, 1998; McBride –Chang, 1999; Scanlon & Vellutino, 1996). These are also skills which have been shown to transfer from a first language to a second. Since DR had a significant impact on early literacy skills among young children in a variety of first languages (Lim & Cole, 2002; Valdez-Menchaca & Whitehurst, 1992) it may be an effective intervention to build skills in L1 and L2. That is, DR may be an effective L1 intervention to build early literacy skills which will then be available to a young child as a tool to enhance second language acquisition. (See Figure 1).

Figure 1. Theoretical Framework



Statement of the Problem

Young children learning English as a second language follow a four-stage developmental sequence of (1) home language use; (2) nonverbal period; (3) telegraphic and formulaic speech; and (4) productive language (Tabors & Snow, 1994). These phases

may be misinterpreted as speech and language delays, learning disabilities, and/or problem behaviors, resulting in the erroneous placement of young children in special education programs (Brice 2002; Rice, Sell, & Hadley 1991; Tabors 1997). In a study of eleven urban schools in California, Artiles, Rueda, Salazar, and Higareda (2005) analyzed the placement of ELL students in special education programs. The district reported a 200% increase in the number of ELLs for the previous 16 years. The elementary grades reported 53% of the students were ELL. Specifically, the study examined the rates of placement in elementary and secondary Learning Disabled (LD) and Language and Speech Impairments (LAS) classes and found that ELLs were consistently overrepresented. In fact, English language learners were 27% more likely to be placed in special education programs than their White, English-speaking peers (Rueda & Windmueller, 2006).

Researchers and practitioners have at times disagreed that overrepresentation is a problem because it results in a child having access to additional resources. Others respond that biased or inappropriate placement in special education programs is problematic for several reasons. In particular, the student is denied access to the general education curriculum, they may receive services that do not meet their needs, and the label may stigmatize children resulting in social isolation and poor educational outcomes (Patton, 1998).

Hypothesis and Research Questions

Based on the findings from the existing literature, the hypothesis of the current study is that explicit code-based instruction, embedded in DR within the home language

context, will increase young children's early literacy skills in their home language (L1) which, in turn, will transfer to L2, thus enhancing their ability to learn English.

To test this hypothesis, this study will attempt to answer the following research questions:

1. Does Dialogic Reading in young DLLs' home language (L1) improve their phonological awareness skills and alphabet knowledge in L1 (Spanish)?
2. Does Dialogic Reading in young DLLs' home language (L1) improve their phonological awareness skills and alphabet knowledge in L2 (English)?
3. Does Dialogic Reading in young DLLs' home language result in a different rate of growth in L1 and L2 skills?

Research Design

A single subject with multiple baselines design across subjects was used to evaluate the effects of the intervention. The *Get Ready to Read Screening Tool – revised* (GRTR; Whitehurst & Lonigan, 2009) was used to test participants' pre- and post-intervention emergent literacy skills. Young DLLs from a mid-Atlantic urban school district participated in daily shared reading sessions. Student researchers who are fluent in Spanish shared Spanish language storybooks with the children several days each week for approximately six weeks. The reading sessions included instruction in phonological awareness and alphabet knowledge skills embedded in Dialogic Reading strategies. Visual analysis of multiple baselines design graphs and paired *t*-tests were used to analyze the study results.

Definition of Terms

Dialogic Reading is an evidenced-based interactive reading strategy by which the adult reader encourages a child's verbalizations by means of prompts, expansions, repetition, and scaffolding. The goal, through repeated readings is to have the child become the storyteller and the adult the audience (Whitehurst, et al, 1988).

Dual Language Learner (DLL) A young child who acquires two or more languages simultaneously, or who learns a second language while continuing to develop their first language. The term "dual language learners" encompasses other terms frequently used, such as Limited English Proficient (LEP), bilingual, English language learners (ELL), English learners, and children who speak a language other than English (LOTE). (U. S. Dept. of Health and Human Services, Administration for Children and Families, Early Childhood Learning and Knowledge Center,

<http://eclkc.ohs.acf.hhs.gov/hslc/Dual%20Language%20Learners/ecl>).

English Language Learner (ELL) is an active learner of the English language who may benefit from various types of language support programs. This term is used mainly in the U.S. to describe K–12 students.

Phonological awareness (PA) is the ability to detect, manipulate, or analyze the auditory aspects of spoken language (including the ability to distinguish or segment words, syllables, or phonemes), independent of meaning. (NELP, 2008)

Alphabet Knowledge (AK) is the knowledge of the names and sounds associated with printed letters. (NELP, 2008).

CHAPTER TWO

A Review of the Literature

The purpose of this section is to present a critical review of the literature related to research on early literacy among young English language learners. Specifically, the following aspects are examined. First, the background on the basic skills needed by all young children to achieve later literacy success is presented. Secondly, second language acquisition with an emphasis on the cross-linguistic transfer of emergent literacy skills is explored. Thirdly, successful interventions which improve those skills are reviewed. Finally, future directions in research on the development of first language skills as a means of improving L1 and L2 literacy among young children are suggested.

Method for Review of the Literature

An electronic search of major education databases ERIC and PSYCH INFO (See Table 1) was conducted. The snowball method was used in a hand-search of selected articles, books, and government reports. An additional search by author was conducted electronically in ERIC and PSYCH INFO of prominent authors in each of the major search categories. Articles were limited to peer-reviewed studies of preschool literacy interventions and correlation studies. Code-based and shared-reading interventions examining young children's emergent literacy skills with pre-and post-intervention measures were included. Studies of basic literacy skills were mostly correlation studies

and regression analyses of relations between basic preschool skills and later reading achievement. Because this review highlights DR as an effective intervention, the search began with studies from 1988, when DR was first proposed and continued through 2010.

Table 1. Literature Review Search Categories and Terms

Category	Search Terms
Basic Early Literacy Skills	Phonological awareness, phonemic awareness, phonological sensitivity
Interventions	Phonology, phonemes, alphabet awareness, alphabetic principle, alphabet name and sound knowledge
Transfer of skills	Code-based, shared-reading, Dialogic Reading, interactive reading, story reading, emergent literacy intervention
Cross-reference	Second language learning, second language acquisition, bilingualism, Spanish-speaking, language acquisition, English language learner, ELL, cross-linguistic transfer, transfer of skills
	Reading, beginning reading, reading readiness, preschool education, reading skills, early reading, emergent literacy, predictor variables, emergent literacy

Basic Skills

In 2002, the National Early Literacy Panel was formed with the goal of finding, synthesizing, and summarizing scientific evidence on early literacy development. The panel formulated four basic research questions:

1. What are the skills and abilities of young children (birth through five years or kindergarten) that predict later reading, writing, or spelling outcomes?

2. Which programs, interventions, and other instructional approaches or procedures have contributed to or inhibited gains in children's skills and abilities that are linked to later outcomes in reading, writing, or spelling?

3. What environments and settings have contributed to or inhibited gains in children's skills and abilities that are linked to later outcomes in reading, writing, or spelling?

4. What child characteristics have contributed to or inhibited gains in children's skills and abilities that are linked to later outcomes in reading, writing, or spelling?

The current study will focus on questions 1 and 2, as they pertain to reading outcomes.

Whitehurst and Lonigan (1998) identified oral language, print and letter knowledge, and phonological processing as skills which are related to later conventional forms of literacy. In a report of the National Research Council's panel on preventing reading difficulties in young children, Snow, Burns, and Griffin (1998) identified three areas in which weaknesses could lead to significant reading problems in young children – oral language, phonological awareness (PA), and alphabet knowledge (AK). But neither study was a comprehensive review of the available empirical evidence. The NELP report is a systematic, empirical summary of research related to early skills and conventional literacy.

The NELP panel conducted a systematic and exhaustive review of the literature and reported on findings of 299 studies. In all the studies, one or more child skills were

measured before age five, and one or more child outcomes of conventional literacy were measured in kindergarten or beyond. All studies met two requirements 1) the skill preceded the conventional literacy skill, and 2) it was related to or predictive of the later literacy skill. The studies reported on outcomes of receptive (decoding and reading comprehension) and expressive (spelling) conventional literacy skills. The panel reported correlations between predictor variables and decoding skills, reading comprehension, and spelling.

Six variables had moderate to strong predictive relationships with measures of conventional literacy - alphabet knowledge (AK), phonological awareness (PA), rapid automatic naming (RAN) of letters and digits, RAN of objects and colors, name writing, and phonological memory. Five additional predictor variables were identified – concepts about print, print knowledge, reading readiness, oral language, and visual processing; however, they did not maintain the predictive relationships when other variables were controlled. Alphabet knowledge (AK) had a strong relationship to decoding skills (average $r = 0.50$ across 52 studies of 7,570 children). Phonological awareness (PA) had moderate relationship to decoding skills (average $r = 0.40$ across 69 studies of 8,443 children). Secondary analysis revealed that the strength of the relationships is not affected by demographic characteristics such as SES or IQ. These two predictor skills are the subject of the current study.

Alphabet Knowledge

In several studies of early reading skills, knowledge of letter names and sounds was found to be the best predictor of later reading abilities. Schatschneider, Francis,

Carlson, Fletcher, and Foorman, (2004) conducted a longitudinal study of 540 children in grades K- 2. Using random selection from a larger study group, researchers sorted participants into two groups, those with data from kindergarten through Grade 1 (N = 384) and those with data from K through Grade 2 (N = 189). Participants were 50% male, more than 50% White, 12% to 15% Hispanic, Asian, or Black, and mostly from mid- to upper SES. The K – Grade 1 group was tested on predictors of early reading; the K- Grade 2 group was tested on predictors of Grade 2 outcomes. Researchers conducted pre- and posttests of early literacy skills. They found that PA, RAN letters, alphabet knowledge (name and sound) had the highest correlations with three reading outcomes. Results of regression analysis indicated these three parameters are roughly equal in their predictive ability of Grade 2 outcomes. Knowledge of letter names may have reached a ceiling toward the end of K and thus became less important. However, knowledge of letter sounds remains predictive. This may be because letter sound knowledge is a rudimentary subset of PA (McBride-Chang, 1999). Further, vocabulary, perceptual matching, and visual-motor perception are not strong predictors of reading outcomes in Grade 1 or 2. A limitation of this study is that there may be other variables not included in the study which could contribute to early reading.

Letter name and sound knowledge have also been found to predict literacy skills separate from other predictors. Burgess and Lonigan, (1998) studied the bidirectional relations of phonological sensitivity and letter knowledge. Participants were recruited from seven preschools. There were 115 for Time 1 testing and 97 for Time 2 testing. All were Caucasian, middle class, and nonreaders. At Time 1, researchers conducted tests of

oral language, phonological sensitivity, and letter knowledge. One year later, at Time 2 they assessed phonological sensitivity, and letter knowledge. Multiple regression analysis revealed that “letter name knowledge was significantly and independently related to growth in higher levels of phonological sensitivity, letter-name knowledge, and letter sound knowledge (p. 133)”. PA and letter knowledge independently predicted growth, meaning they are not overlapping skills. Overall, findings indicate early reading skills, such as letter name and sound knowledge, are reciprocally related to phonological sensitivity. Further, the relation is present prior to formal reading instruction and the differences are stable from preschool through Grade 1.

McBride –Chang (1999) looked at the development of letter knowledge and examined the relation between letter name (LN) and letter sound (LS). Participants were 91 (42 female) preschool age children from four public schools, across the SES spectrum. All were native English-speakers and non-readers. The researcher considered three questions: 1) to what extent do LN and LS share variance? 2) How are variances in LN and LS associated with subsequent reading skills? 3) To what extent is learning LN and LS dependent upon linguistic features of letters to be learned? The children were tested four times at five month intervals using tests of general cognitive ability PA, letter knowledge, and reading and spelling. Results of correlation studies and hierarchical linear modeling (HLM) indicated that LN predicts LN, LS does not predict LN, and LN and LS uniquely predict LS. Further, LS is a better predictor of subsequent reading-related skills because of its relationship to the sound structure of language, i.e. phonological sensitivity. The association between LN and LS learning is not a one-to-one

relationship. Further, the linguistic features of a letter name influence the learning of its sound. Limiting aspects of this study are the use of only capital letters and the lack of attention to formal reading instruction that was occurring in the classrooms. The participants also took part in a PA program but showed no significant gains in outcomes.

Children with poor knowledge of letter names and sounds struggle with learning to read and often are diagnosed with reading disabilities. Gallagher, Frith, and Snowling, (2000) examined the precursors of literacy delay among children at genetic risk of dyslexia. Families were recruited through the National Network of British Dyslexia Association. Participants were urban and suburban and all were native English speakers. The children in the experimental group were at risk for literacy impairment on the basis of having a dyslexic first-degree relative. There were 31 males, 32 females and the average age was 45.7 months. The comparison group was comprised of 34 (18 female/16male) unaffected families, that is, they had no known genetic risk for dyslexia. The mean age was 45 months. Researchers wanted to know how literacy-delayed children differ cognitively from a control group of typically developing children. Specifically, they examined which 3-year-old language skills predict individual differences in literacy development at age six years old. At 45 months, all participants received pre-tests of nonverbal ability, vocabulary development, expressive language, speech development and phonological processing. Posttests which were administered at six years old assessed general cognitive ability, basic reading, reading comprehension, spelling, phonetic spelling, and nonword reading. Researchers used regression analyses to identify which skills are predictors of literacy development. Results indicate letter

knowledge is an important early predictor of literacy success. At-risk children also showed weaknesses in tasks considered to assess phonological processing. It should be noted that Gallagher, et al. found that these differences in literacy success did not reflect a lack of linguistic stimulation in dyslexic homes. Letter knowledge gives children the ability to decode novel words, therefore, literacy development of children with poor letter knowledge will be delayed; moreover, we can expect delays in the development of word-specific print-sound associations. Children in this study were at a relatively early stage of literacy development; those who were considered at risk for dyslexia may not develop the disorder later. The sample was very selective, all participating families were from mid-to-high SES, and all mothers had some level of college education.

Torppa, Poikkeus, Laakso, Eklund and Lyytinen, (2006) also studied children with familial risk for dyslexia. They used a pre-/posttest control group design to examine the relation between delayed letter knowledge development and Grade 1 reading achievement. Of 186 participants drawn from a larger, longitudinal study, 96 had a familial risk for dyslexia, all were native Finnish speakers, and none had disabilities. Children were assessed between the ages of 3.5 and 6.5 years old. At 3.5 years they received tests of letter knowledge, vocabulary, phonological sensitivity, phonological memory, rapid naming of objects, and I.Q.; at 6.5 years old they were assessed on skills of beginning reading. Using trajectory analysis, researchers compared the number of letters named to outcomes on early reading tests. A delayed letter naming learning curve was strongly related to subsequent difficulties in beginning reading. Even among at-risk children, AK predicted reading fluency in Grade 1. The strongest predictor of delayed

letter naming was phonological skills. Torppa, et al. describes a “powerful association” (p. 1138). It should be noted that the letter naming task was presented in four sets and was discontinued when a child did not know a set. By discontinuing at this point, some skills may have been missed. The assessments considered only uppercase letters because that is the protocol in the Finnish schools system for students of these ages.

Phonological Awareness

There is strong evidence for the importance of phonological awareness and alphabet sound knowledge to learning to read. In alphabetic languages, children must develop phonological awareness of the spoken words and understand how orthographic symbols are mapped onto phonological subcomponents (Durgunoglu, Nagy, & Hancin-Bhatt, 1993). Specific aspects of PA, i.e. rhyme and alliteration, have been shown to make important and distinct contributions to reading performance. Letter naming, rapid automatized naming (RAN) of letters, and phoneme segmentation are highly correlated with and predictive of later reading. In fact, there is evidence that PA has a causal role in learning to read. Bryant, MacLean, Bradley, and J. Crossland (1990) tested three theories to explain the relationships among rhyme and alliteration, phoneme detection (PA skills), and reading and spelling. Model 1 suggests that rhyme and alliteration have no connection to reading and spelling and thus have no link to phoneme detection. Model 2 holds that sensitivity to rhyme leads to an awareness of phonemes which plays a key role in successful reading and spelling. Model 3 suggests that phoneme detection, and rhyme and alliteration make distinct, direct contributions to reading and spelling. They conducted a longitudinal study of 64 -preschool children with an average age of 4 years,

7 months from a wide range of social backgrounds. Pretests were researcher-developed tests of rhyme, alliteration, and phoneme detection. The final of four testing sessions consisted of two reading, one arithmetic, and one spelling test. The average age of the children at posttests was 6 years, 7 months. Using correlation studies and multiple regression, researchers examined the predictive significance of rhyme and alliteration detection, and phoneme detection on measures of reading, spelling, and arithmetic. Results indicate early rhyming skills are important to later reading skills. There is a strong, consistent, and specific relation between PA skills and reading. PA accounted for 65% to 71% of the variance in reading scores. Rhyme and alliteration may be developmental precursors of phoneme detection. The study supported two of the theories put forth by the researchers:

1. Sensitivity to rhyme leads to sensitivity to phonemes which helps children learn about grapheme-phoneme correspondence and contributes to reading ability.
2. PA skills make direct and distinctive contributions to children's reading ability.

Additionally, results of multiple regression analysis offer no support for Model 1, that rhyme and alliteration have no connection to reading and spelling and thus no connection to phoneme detection. Limitations of the study include a limited participant pool of only native English-speakers drawn from a middle SES area.

Basic emergent reading skills and phonological sensitivity have been shown to be reciprocal in preschool children. Burgess and Lonigan (1998) demonstrated that “phonological sensitivity facilitates the development of early reading and early reading facilitates the development of phonological sensitivity” (p. 117). They assessed skills in

97 preschool children, of whom 52.6% were male and most were Caucasian and middleclass; all were nonreaders. Children were tested at Time 1 using standardized tests of oral language, phonological sensitivity, and letter knowledge. At Time 2, children received tests of phonological sensitivity and letter knowledge only. Correlations between variables showed phonological sensitivity to be very stable from Time 1 to Time 2, and letter knowledge to be moderately stable. Multiple regression analysis showed that letter name knowledge was significantly and independently related to growth in higher levels of phonological sensitivity, letter-name knowledge, and letter sound knowledge. These two independently predicted growth, meaning they are not overlapping skills. Further, early reading skills and phonological sensitivity are reciprocally related in preschool children; and the relation is present prior to the onset of formal reading instruction. Finally, the individual differences in these areas are stable from preschool to K and grade 1.

In a longitudinal study of 1400 children from seven schools, Scanlon and Vellutino (1996) examined the link between early instruction in prerequisite skills, and success in first-grade reading. They measured linguistic processing, memory conceptual development, and executive functions early in the kindergarten year. Scores were correlated with the outcomes of the Woodcock Reading Mastery Test-Revised which was administered at the end of first grade. Overall findings support the importance of PA in the development of skill in reading. Correlations and step-wise regression analysis indicated that letter and number identification skills are the variables most strongly related to first-grade reading performance. Letter-name knowledge and phoneme

segmentation skill at the beginning of kindergarten were found to be the best predictors of first-grade reading performance. Other linguistically based measures are moderately correlated with later reading performance. Teacher observations and ratings indicated that children judged to be reading in the average or better range in first grade, received help becoming attuned to the sound structure of language; that is, early phonological awareness skills. The major limitation to this study is the use of a purposive sample of middle SES, English-speaking children. The researchers hoped to eliminate other possible contributors to reading deficits, such as low SES and second language acquisition.

Schatschneider, Francis, Carlson, Fletcher, and Foorman, (2004) examined a variety of measures which they theorized could be predictive of first or second grade reading outcomes. Children from three preschools were chosen randomly from a group participating in a larger study. All were assessed in kindergarten; some (384) were given posttests in first grade and others (189) were assessed in second grade. Participants were 50% male and mostly white (53-54%) with roughly even percentages of African-American (14-17%), Asian (13-14%), and Hispanic (15-16%). Pretests, given in kindergarten, measured constructs thought to be important in the development of early reading, phonological awareness (PA), alphabet knowledge (AK), rapid automatized naming (RAN), vocabulary, visual motor integration, and recognition and discrimination. Posttests were standardized measures of academic achievement such as Woodcock-Johnson, revised (Woodcock & Johnson, 1989) and the Test of Word Reading Efficiency (TOWRE; Torgesson, Wagner, & Rashotte, 1999). Findings indicate PA, RAN letters,

and knowledge of letter names and sounds had the highest correlations with the reading outcomes; these three parameters were roughly equal in their predictive ability of later reading ability (Schatschneider, et al.). Knowledge of letter names became less important at the end of kindergarten, maybe because of a ceiling effect; however, knowledge of letter sounds, a rudimentary subset of PA, remained predictive. Further, results indicate vocabulary, perceptual matching, and visual-motor perception are not strong predictors of reading outcomes in Grades 1 and 2. Limitations to the study include a sample of mostly middle to upper SES children, and the omission of a number of variables which may contribute to reading ability.

Bus and IJzendoorn (1999) conducted a meta-analysis of 36 phonological training studies with more than 700 children. The studies focused on the effects of phonological training on phonological awareness and reading. Results from the analysis revealed strong correlations between the trainings and phonological awareness ($d = 0.73$, $r = .34$ ($p < .001$)) and reading ($d = 0.70$, $r = .33$ ($p < .001$)). Phonological training consistently enhanced PA and reading skills. The most significant effects were noted when PA and letter sound correspondence were presented together in the training. The overall number is deceptively small because in some studies the group was the unit of analysis. The authors concluded that “the training studies settle the issue of the causal role of phonological awareness in learning to read” (p. 441).

Combination of Instruction

Byrne and Fielding-Barnsley (1991) reported on four studies of a program designed to teach phonological structure. Children in four preschools were randomly

assigned to experimental (64) or control (62) groups and pretested on skills in vocabulary and PA. Pretests were the Peabody Picture Vocabulary Test- Revised, Clay's Concepts about Print test, and researcher-developed tests of rhyme recognition and letter name and sound knowledge. The intervention consisted of a combination of instruction in phonological awareness and alphabet knowledge over twelve weeks. Groups of 4 to 6 children received instruction in PA using the *Sound Foundations* program (Byrne & Fielding Barnsley, 1991). Researchers also met with small groups of control participants to read stories and engage in a variety of related activities; however, there was no direct instruction in phonemic skills for the control group. The phoneme recognition tests and a limited version of the AK test were repeated following intervention. An additional test of reading was administered, too. Outcomes on posttests indicate the combination of instruction in phonemic organization and letter sounds appears to be the most favorable design for successful early reading. Overall findings indicate alphabetic insight and PA both are crucial to the act of reading. Phoneme identity is a stable construct which children can use for sounds other than the ones on which they have been trained. The study was not longitudinal and thus does not provide insight into the long term benefits of PA training. Results do not reflect comparison with typical classroom instruction.

Transfer of Skills

The most commonly held theory of second language acquisition among young children is the transfer of skills. Cummins (1996) suggested that "common underlying proficiencies" (p. 250) in language may exist such that skills in the first language (L1) will mediate acquisition of a second language (L2). The *cross-linguistic transfer* of skills

may be conceptualized as “the access and use of linguistic resources in L1 by students while learning other languages” (Leafstadt & Gerber, p. 27). Many other studies link the development of first language (L1) skills to the acquisition of a second language (L2; English) among preschool-age children (Cardenas-Hagan, Carlson, & Pollard-Durodola, 2007; Dickinson, McCabe, Clark-Chiarelli, and Wolf, 2004). Specifically, phonological awareness, syntactic comprehension, and letter name and sound knowledge in the home language have been shown to enhance second language acquisition in young children. Dickinson, et al. (2004) investigated the relationship between phonological awareness (PA) and bilingualism. Initial scores on PA in one language corresponded to the similar scores in the other language. In fact, the strongest predictor of PA in the spring in one language was the child’s level of PA in the fall in the other language.

Durgunoglu, Nagy, and Hancin-Bhatt, (1993) researched the cross linguistic transfer of emergent literacy skills. They asked if phonological awareness in a child’s first language (L1), in this case Spanish, related to word recognition in English, the second language (L2); and what is the role of second-language proficiency on word recognition in L2. Participants were 27 (16 male) Spanish-speaking first-graders from two schools; mean age was 85.3 months. Participants were non-fluent beginning readers. All were low-income, Latino participating in transitional bilingual programs where instruction was focused on the development of oral proficiency in English. Over a period of two weeks students received assessments in Spanish and then English of letter identification, word recognition, and phonological awareness. Researchers also administered the Spanish and English Language Assessment Scales (pre-LAS Tests)

which includes listening comprehension, vocabulary, and language comprehension and production. Researchers analyzed resulting data using correlation studies and multiple regression analysis. Related to the first research question, regression analysis indicated that phonological awareness in Spanish is closely related to word recognition in Spanish. Moreover, L1 phonological awareness and L1 word recognition independently predict English word recognition and good performance on Spanish phonological awareness was correlated to an ability to read English words. Phonological awareness was a significant predictor of performance on word recognition tests within and across languages (p. 461). In contrast, neither Spanish nor English oral language proficiency was related to word recognition in English. This study included only 27 participants and considered a limited number of possible components of the reading process. In the presence of other components, oral language proficiency may have a more prominent influence.

Lopez and Greenfield (2004) found similar relationships in a study of 100 Head Start children in 11 classrooms from three Head Start centers. All the children were Hispanic from Cuba, Honduras, or Nicaragua. The average age was 56 months. Children's phonological skills and oral language proficiency were assessed in English and Spanish. Pre- and posttest data were analyzed with t-tests, correlation studies, and multiple regression analysis. For regression analysis the dependent variable was English PA; the independent variables were English oral proficiency, Spanish oral proficiency, and Spanish PA. Results revealed that phonological awareness in English was directly related to PA in Spanish for the participating children. All three independent variables were significant predictors of English PA (Lopez & Greenfield) leading to the conclusion

that some metalinguistic skills transfer across languages. In contrast, oral language proficiency did not relate across languages. This study lends support to the concept that there is an underlying mechanism such that strengthening phonological skills in one language will help strengthen the skills in L2.

Stewart (2004) considered what language should be used to teach PA to bilingual preschoolers. He reviewed, analyzed, and offered recommendations of research on phonological awareness in the education of young bilingual children. The review covered research related to preschoolers' phonological skills, cross-language transfer of PA, and phonological curricula. The analysis revealed that phonological awareness plays a causal role in the development of early literacy skills; that weak PA skills are related to later reading difficulty, but are remediable; and that PA can and should be taught to young children. Seven studies of phonological awareness and bilingual preschoolers concluded that there is strong evidence that PA skills are generalizable and transferable from L1 to L2. Stewart concluded that bilingual students should be taught PA skills in both L1 and L2, but there is a need for phonological awareness programs in languages other than English.

Interventions

To analyze effective interventions and instructional strategies NELP considered three areas: code focused instructional strategies, shared-reading interventions, and parent and home programs. Code-focused instructional strategies provide explicit teaching experiences in PA, phonics, alphabet knowledge, or print awareness. Shared-reading storybook interventions focused on parents or teachers as facilitators in the classroom or

the home. Home programs used parents as facilitators of a variety of interventions designed to increase literacy activities in the home.

Explicit instruction of code-related skills resulted in moderate to large effects on measures of early literacy such as PA and AK. Phonological awareness emerged as the area most significantly affected by direct instruction. In fact, children in these studies scored 0.82 of a standard deviation higher on measures of PA than the comparison groups (NELP). The shared-reading studies included in this report provided either a substantial increase in reading experiences or a change in the style of shared-reading. Findings of the NELP report indicate shared-reading has a significant positive effect on young children's oral language skills. Roberts, Jergens, and Burchinal (2005) found that a global measure of home literacy, including frequency of shared-reading, was a strong predictor of child outcomes on measures of receptive and expressive language. Additionally, when Head Start teachers used specific interactive reading strategies in their classrooms children scored significantly higher on measures of expressive and receptive language than their peers in the comparison groups (Wasik, Bond, & Hindeman, 2006). A number of studies have used specific interactive reading strategies called Dialogic Reading (DR; Whitehurst, et al., 1998) as the intervention to enhance young children's early language skills.

Dialogic Reading

Whitehurst, et al. (1988) developed an approach to shared reading that emphasizes scaffolding, extension, open-ended questions, WH- questions, repeated readings, and interaction between the adult reader and the child. Their Dialogic Reading

(DR) program is based on a Vygotskian (1978) model which supports children's learning in a supportive social context. Parents, caregivers, and teachers use a variety of questioning methods to increase the child's comprehension and vocabulary. Two strategic sequences are designed to increase a child's engagement in the shared-reading process. (See Appendix A). The adult reader prompts the child to comment, evaluates the child's comment, expands it, and repeats what the child has said – PEER. The second sequence, CROWD, suggests the types of questions that help expand key literacy and language skills: completion, recall, open-ended, wh-, and distancing questions. The strategies have been shown to support the development of children's oral language and early literacy skills. Researchers employing DR strategies have reported significant positive results in oral language development in L1 among children from middle and low SES conditions, children who have language delays, and children who speak home languages other than English (Crain-Thoreson & Dale, 1999; Lonigan and Whitehurst, 1998; Valdez-Manchaca & Whitehurst, 1992; Whitehurst, et al., 1988).

Whitehurst, et al. (1988) hoped to establish a link between home reading practices and early language development. Middle-class parents, meeting in a university setting, were taught to use dialogic methods while reading with their preschool-age children. Specifically parents were asked "... (a) to encourage the child to speak more often through use of wh—questions and open-ended questions, (b) to repeat, expand, and recast the child's speech more often, and (c) to provide praise and corrective feedback contingent on the child's speech" (Whitehurst, et al., p. 558). Posttests results showed children in the experimental group spoke more phrases, used fewer single word

statements, and had a higher mean length of utterance (MLU) than children in the comparison group. Children in the experimental group scored significantly higher on Illinois Test of Psycholinguistic Abilities (ITPA) $t(7) = 3.941, p = .0005$, and the Expressive One Word Picture Vocabulary Test (EOWPVT) $t(27) = 2.513, p = .009$. Scores on the Peabody Picture Vocabulary (PPVT), showed improvement in the experimental group, but they were not statistically significant (Whitehurst, et al.). In subsequent studies, dialogic reading techniques were found to have significant effects when used with children in low SES conditions, with children with language delays, and with Spanish speaking children in a Mexican childcare center (Crain-Thoreson & Dale, 1999; Lonigan & Whitehurst, 1998; Valdez-Menchaca & Whitehurst, 1992). Children made significant gains on tests of oral language and emergent literacy skills when the shared-reading was facilitated by teachers, parents, volunteers, and researchers.

Socio-economic Status. Socioeconomic status may influence school achievement. Children in low SES are at particular risk for educational problems (Whitehurst & Lonigan, 1998). They have access to fewer print materials, experience fewer hours of one-on-one reading with an adult, and their parents engage in fewer instructional behaviors during shared-reading (Ninio, 1980). As a result, children of low SES lag behind others in areas of importance to emergent literacy and continued academic success.

In a study of 94 kindergarten children from low income families, Korat, et al.,(2007) asked the following questions: “(1) Do maternal reading mediation and family home literacy environment (HLE) relate to children’s emergent literacy (EL) level: and

(2) Do the relationships among these variables differ as a function of socioeconomic strata (SES) level?" (p. 367). Surveys of home literacy environment revealed significant differences between the high SES group and the low SES group. Results indicated the low SES households had significantly fewer books (children's and adults); the low SES parents read to their children less frequently; and there were significantly fewer educational games available in the homes. Children in the two groups were tested in five areas of emergent literacy: print concept, word recognition, phonological awareness, letter names, and emergent book reading. In all five areas, the high SES group scored significantly higher.

Whitehurst, et al (1994) considered within group differences in home literacy environments and proposed that there is a potential for change within social strata. They tested the theory using an intervention with children from low-income households to determine if specific shared-reading strategies, used in the home and the school, would affect expressive vocabulary. Following pretests, the children were assigned to three treatment groups – home and school reading, school-only reading, and a play group in the classroom. Results from posttests indicate that shared-reading in the home and school condition produced significant positive results in children's expressive vocabulary, $F(1, 49) = 4.39, p = .041$. In addition, they found positive correlations between children's performance on language assessments and aspects of the home literacy environment, specifically, the number of books in the home and the child's enjoyment of shared reading.

Home Reading. Extending the previous research, Lonigan and Whitehurst (1998) used random assignment within classrooms to assign 100 preschoolers from low income households to four conditions: school reading, home reading, school and home reading, and no treatment. By adding the home-only condition, researchers hoped to determine if the parent reading condition, without the accompanying school reading, was sufficient to effect a significant change in children's oral language. Parents and teachers were trained to use dialogic reading techniques. The children received three standardized tests of oral language before and after the six-week intervention. On pretests of expressive ($M = 74.9$, $SD = 13.31$) and receptive ($M = 83.6$, $SD = 8.22$) vocabulary, children scored significantly lower than average as measured by standardized tests. A 4 (group) X 2 (center compliance) analysis of covariance indicated a significant effect of intervention group. The school plus home group scored higher than the control group on the EOWPVT $F(1, 79) = 4.72$, $p = .03$; and the home only group outscored the school only group and the combined school plus home group $F(1, 79) = 8.64$, $p = .005$. Additionally, the combined three treatment groups scored higher than the control group on all measures. Children in the groups involving home reading had the largest and most significant gains in measures of oral language. Additional findings indicated that parents are more influential than teachers in increasing children's use of descriptive language and, in this study, home reading was more frequent than school reading. Parents who returned the reading logs indicated they read to their children with greater frequency than teachers in either of the two childcare centers. Significant gains in measures of oral language might be attributable to the one-on-one reading experience in the home. A

parent may be able to scaffold and extend her child's comments on an individual basis better than teachers can in a group setting.

Researchers have used face-to-face and video-taped trainings to teach parents how to use DR and have found both to be effective. In a study of 18 caregiver-child dyads, parents received training in DR via videotape (Blom-Hoffman, et al., 2006) and were found to be effective facilitators of DR. Following the training, researchers visited the families at home three times and made videotapes of shared reading each time. Researchers coded the videos to assess parent reading behaviors and child verbalizing behaviors. They compared outcomes from pretests and posttests taken six weeks and twelve weeks after the intervention. There were no differences among the groups at pretest but a significant difference was noted in facilitating verbalizations at the six week assessment ($ES = 2.26$). A similarly large effect size was present at the twelve week posttest ($ES = 1.36$). Children's on-task verbalizations were assessed during shared-readings at three time-points, pre-, post- (6 weeks), and post- (12 weeks) intervention. At six weeks a large effect size ($ES = .78$) was noted. The effects of the parent/child interactions were still present at twelve weeks ($ES = 1.26$).

The language and literacy environment of the home can be very important in predicting children's early language and literacy development. The previously mentioned studies took place in a school/childcare setting or in a combined home and school setting; additional research used dialogic reading strategies with parents in a home-only setting. In a longitudinal study of the relationship between home literacy practices and children's language and emergent literacy skills, Roberts, et al., (2005) followed 72 African

American families for nearly five years. They examined the effects of specific home literacy practices such as shared book reading frequency, maternal book reading strategies, child's enjoyment of reading, and maternal sensitivity, over and above global measures of home literacy, on language and literacy development in preschool age children. They administered the Home Observation for Measurement of the Environment Inventory (HOME), a global measure of overall responsiveness and support of the home environment. The HOME measures several constructs including academic and language stimulation and maternal involvement with the child. Results of the study indicate that maternal sensitivity was significantly related to children's receptive vocabulary $F(1, 67) = 6.61, p < .05$ and use of book reading strategies was related to scores on the PPVT, $F(1, 67) = 6.45, p < .05$. HOME, however, was positively related to all four areas of emergent literacy: receptive vocabulary, receptive language, expressive language, and early literacy skills. The HOME "...was the most consistent predictor of children's language and literacy skills" (p. 355).

Huebner and Meltzoff (2005) found that training parents in dialogic reading at a community center resulted in a four-fold increase in parents' use of interactive reading strategies in the home and had significant effects on children's language development. The participating families were randomly assigned to three groups; demographic information revealed no significant differences among groups in terms of family or child characteristics. Paired *t*-tests showed significant difference in the use of dialogic reading between baseline and posttests from 0.30 to 1.38 ($t(24) = 2.92, p < .01$). After parents received the training in dialogic reading, the children's verbal interactions during shared

reading changed as well. The number of utterances increased from $M = 17.61$ to $M = 26.70$; $t(24) = 2.40, p < .02$ and the length of the longest five utterances increased from $M = 2.79$ to $M = 3.36$; $t(22) = 2.26, p < .03$.

Levin and Aram (2012) employed similar interactive reading strategies with 124 families of low SES from Tel Aviv. The families received videotaped training in three target areas: shared reading, writing, and visuomotor skills. This review focuses on the shared reading portion of the study. Researchers provided storybooks annotated with questions to guide the parents' scaffolding activities while reading at home with their children. Most of the questions focused on text comprehension or word meaning. Pretests and posttests (immediately after intervention and delayed posttest) were used to assess alphabetic skills and linguistic competencies. Reading interactions were videotaped, transcribed, and coded. Researchers assessed child performance using tests of letter naming, letter sounding, identifying initial letter sounds, receptive and expressive vocabulary, definitions, and listening comprehension. The authors analyzed concepts such as the number of maternally initiated dialogues, the number of child-initiated dialogues, and Z-scores of enhancing dialogues. Results of the pretests revealed no differences in the characteristics of the groups. On posttests, the storybook reading group "...significantly surpassed all other groups on all characteristics" (p. 13). Additionally, the reading group outscored the others in number of mother-initiated dialogues and on enhancing dialogues on delayed posttests. There were no differences among the other three groups on delayed posttests; and the reading intervention did not produce higher scores on the expressive and receptive vocabulary tests, or on the

definitions test. Receptive and expressive vocabularies are broad competencies that develop over many years. The authors theorized that a long term intervention may be more effective for revealing differences in these areas. Alphabet skills such as letter knowledge and phonemic awareness are more responsive to short term intervention because they are specific and limited skills.

Language Delays. In addition to typically developing second language learners and children from low income households, children with language delays may also benefit from the use of dialogic reading strategies (Crain-Thoreson & Dale, 1999). Parents and special education teachers of 32 children with language delays received training in the use of dialogic reading strategies. Participants were assigned to three groups for shared-book reading: (a) parents who were trained in DR, (b) teachers/staff who were trained in DR, (c) teachers/staff with no specialized training. Children in the study received pretests of vocabulary. All participants were videotaped during a shared-reading experience prior to the intervention. The testing procedure was repeated following the DR training. Parents' reading behaviors changed significantly as a result of the training. Specifically, a significant increase was identified in their use of acknowledgements, ($F(1, 29) = 15.76, p < .01$), expansions, ($F(1, 29) = 15.76, p < .01$), open-ended questions, ($F(1, 29) = 50.41, p < .01$), and who/what questions. Although differences in children's performance on standardized tests of vocabulary were not statistically significant among intervention groups, the authors hypothesized that the differences were indeed due to DR training. The differences were more than what would be expected due to maturation alone. There was a pattern of positive correlation

coefficients between the children's pretest language scores and their gains; and there was a positive relationship between the magnitude of change in adult reading behavior and the magnitude of child language growth. This study has clinical importance because it demonstrates a method of eliciting more "complex linguistic performance" (Crain-Thoreson & Dale, p. 38) from children with language delays.

Other First Languages. Dialogic Reading is an effective practice with children who speak first languages other than English. Valdez-Menchaca and Whitehurst (1992) conducted a study using dialogic reading techniques with working-class, Spanish-speaking families in a Mexican daycare. Many of the mothers were single or divorced and most had no more than ten years of education. Teachers in the childcare center received training in DR and implemented the intervention. The specific shared book-reading strategies proved effective at significantly increasing children's scores on measures of expressive and receptive vocabulary. Children in the experimental group scored significantly higher than children in the control group on three measures of emergent literacy, PPVT-R, EOWPVT, and ITPA. The size effect across the three measures was 1.56. Typically, size effects of .33 to 1.0 are considered large. Children in the experimental group also produced a greater number of utterances, and longer and more complex sentences than the control group. This study provides evidence that an intervention which encourages the use of interactive reading strategies implemented by trained teachers can be effective in the child's first language, in this case Spanish.

Lim and Cole (2002) examined the effectiveness of Dialogic Reading with typically developing three- and four-year-olds whose home language was Korean. In this

case, parents facilitated the DR intervention and the study yielded significant positive results in emergent literacy skills. Unlike Spanish, Korean does not share an alphabet with English; yet both studies indicated the specific language-enhancing strategies used with dialogic reading resulted in an increase in children's language production and receptive vocabulary. Further studies are warranted to examine the effects of similar interventions in a child's home language on the development and acquisition of English as a second language.

Research Gap

Research presented here establishes the effectiveness of dialogic reading to increase oral language skills across socio-economic levels, facilitators, and settings, and in a variety of home languages. There is also a strong body of evidence to support Cummins' theory of a cross-linguistic effect among certain early reading skills. Phonological awareness and alphabet knowledge have been shown to transfer from L1 to L2 and specifically between Spanish and English. However, little (or no) research has been conducted to examine the effects of dialogic reading on the transfer of phonological awareness and alphabet knowledge between L1 and L2. The current study will examine the use of dialogic reading as a vehicle to provide training in phonological awareness and alphabet knowledge in Spanish. Further, the study will assess the impact of the embedded training on children's L2 (English) phonological skills.

Theoretical Framework

The theoretical framework for the current study derives from Vygotsky's Social Development Theory of Learning which states that social interaction and culture can

significantly impact cognitive development (Vygotsky, 1976). Vygotsky placed young children's cognitive development in a social context and focused much of his work on a "zone of proximal development". The zone of proximal development defines "those functions that have not matured but are in the process of maturation, functions that will mature tomorrow but that are currently in an embryonic state" (p.83). It is "the distance between the actual developmental level and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86). Wood, Bruner, and Ross (1976) further defined this interactive, instructional relationship as scaffolding. While scaffolding, an adult will maintain a child's attention, reduce the task demands to a manageable level, help the child focus on problem solving, control frustration, and show solutions at the appropriate time (Wood, Burner, & Ross, 1976).

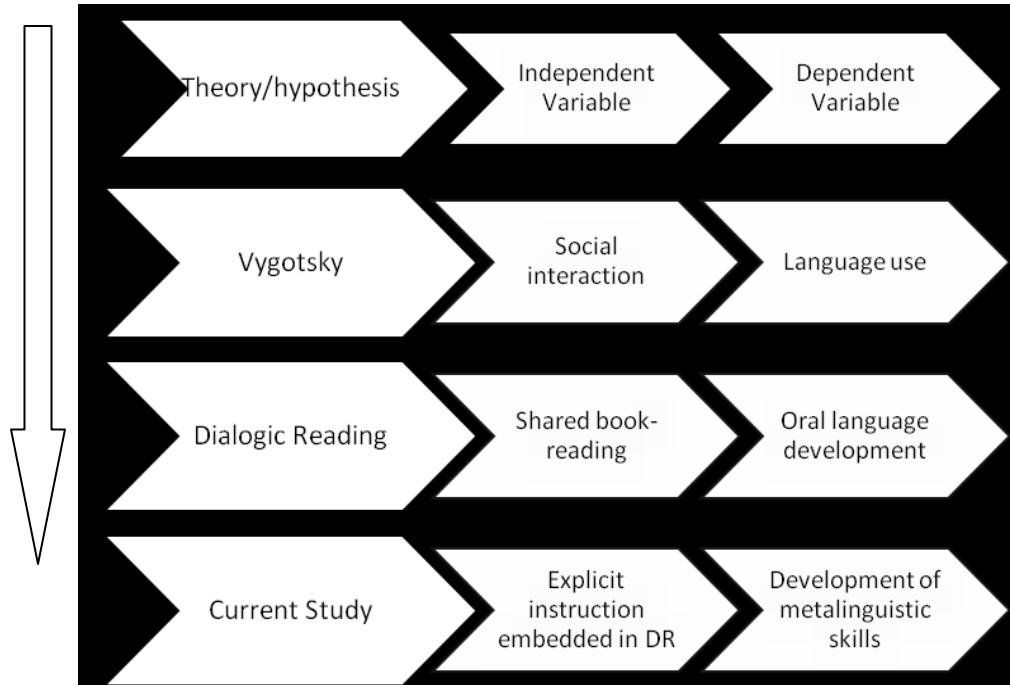
Language development, in particular, is a socially-mediated process (Vygotsky, 1962). Language acquisition occurs when people interact in a communicative context; social interaction determines language use (Vygotsky, 1962). In young children, thought and language develop concurrently and independently. Around the age of two years, a child begins to learn that everything has a name. The development of semantic knowledge is closely related to the acquisition of conceptual knowledge. At this time, thought and speech join so that thoughts are now spoken.

Research has shown that phonological awareness and letter knowledge have substantial predictive relations with later conventional reading skills (Lonigan, Burgess, & Anthony, 2000). Cummins suggested that certain early literacy skills can transfer from

a first language to a second. That is, once a child learns these skills, they are available to support the acquisition of a second language (Cummins, 2003). Among these cross-linguistic skills are PA and AK (Dickinson, et al., 2004; Durgunoglu, Nagy, and Hancin-Bhatt, 1993).

Interactive shared-reading experiences such as Dialogic Reading are socially-oriented and highly contextualized. Considering Vygotsky's theory of socially-mediated cognitive development, one would expect DR to be a highly effective learning experience. In fact, DR is considered an evidenced-based practice for enhancing oral language skills in young children. The current study will attempt to determine the usefulness of DR to provide direct instruction in metalinguistic skills that are known to transfer from a first language to a second language. The hypothesis is that young children who receive explicit instruction in phonological awareness and letter name and sound knowledge will show significant growth in measures of emergent literacy in their home language (Spanish) and in English (L2).

Figure 2. Concept Model for Language Intervention



CHAPTER THREE

Methodology

Research has shown that mastery of certain early language and literacy skills is linked to later academic success (Espinosa, 2007; NELP, 2008). Additionally, some of those skills, once learned in a first language are available to children as tools which support their acquisition of a second language (Cummins, 1996; Dickinson, et al., 2004; Leafstadt & Gerber, 2005). Poor English language skills present challenges for young dual language learners (DLLs) – including misdiagnosis of special needs, unnecessary placement in special education programs, and low overall academic achievement throughout their school careers. A number of studies have shown a gap in kindergarten readiness between DLL children and their native English speaking peers (CADOE, 2012; Espinosa, L. M., 2011; Reardon & Galindo, 2006); at the same time, the cognitive benefits of bilingualism have been shown to be significant and long-lasting (Bialystok, E. 2011). Effective interventions with young DLLs are needed to alleviate these challenges to academic success and promote bilingualism. Research has shown that strengthening a child's home language skills may be the most powerful means of enhancing the acquisition of English skills (Snow, Burns, and Griffin, 1998).

Dialogic Reading (DR) is an evidence-based intervention based on Vygotsky's theory that learning is a social construct (Vygotsky, 1962). It has been used effectively to promote oral language development in young children from middle and low SES conditions, children who have language delays, and children

who speak languages other than English (Crain-Thoreson & Dale, 1999; Lonigan & Whitehurst, 1998; Valdez-Manchaca & Whitehurst, 1992; Whitehurst, et al., 1988). The purpose of this study is to determine if explicit instruction in phonological awareness and alphabet knowledge (PA and AK) embedded in Dialogic Reading has a significant impact on young DLL's early literacy skills in English and Spanish. Specifically, the study will address the following research questions:

1. Does instruction embedded in Dialogic Reading in young DLLs' home language (L1) improve their phonological awareness skills and alphabet knowledge in L1 (Spanish)?

2. Does instruction embedded in Dialogic Reading in young DLLs' home language (L1) improve their phonological awareness skills and alphabet knowledge in L2 (English)?

3. Does instruction embedded in Dialogic Reading in young DLLs' home language result in a different rate of growth in L1 and L2 skills?

Participants

Participants were 15 preschool children, ages four to five years, who are dual language (Spanish/English) learners (DLLs) (see Table 1). The children are enrolled in a preschool program in a mid-Atlantic urban school system. The birthdates for two of the participants was not available. However, all of the children met the age requirement for the pre-school program, meaning they were 4 to 5 years old. The parents or legal guardians participated in an informed consent process after which they completed a consent form and a family background questionnaire. Informed consent occurred during

face-to-face meetings when possible and by telephone. Additional family demographic information was collected from existing school records. Parents of eligible children indicated on the questionnaire that the dominant language used at home is Spanish. For the purpose of this study, “dominant language” is the one that is used at least 50% of the time in the child’s home environment. Participant families are immigrants from a variety of Central and South American countries, including Mexico, Costa Rica, Honduras, San Salvador, and the Dominican Republic. Some of the children were born in the family’s native country and others were born in the United States. The pre-tests indicated the children’s skills in key areas of early literacy fell in the below average to average range for their ages. On the Spanish language pre-test, eight children scored below average and seven achieved average score rating. When tested on their skills in English, ten children scored below average and five scored in the average range. The *Get Ready to Read! Screening Tool -revised* (GRTR; Whitehurst, 2001) was used for initial screening of early literacy skills. Given their ages and the extent of exposure to English in school and in the community, this study will not distinguish between native born and immigrant children.

Table 2. Demographic Background of Participants

Participant	Classroom	Age at pre-test	Age at posttest	Language spoken in the home
Jacinta	MJ	4y 5m	4y 5m	Spanish
Noe	MJ	4y 8m	4y 7m	Spanish
Alana	MJ	4y 5m	4y 7m	Spanish
Inez	MJ	4y 4m	4y 8m	Spanish
Dalia	MJ	4y 8m	4y 10m	Spanish
Hugo*	MM			
Carlos*	MM			
Lara	MM	4y 1m	4y 3m	Spanish
Flor	MM	4y 11m	5y 1m	Spanish
Frida	MM	4y 11m	5y 1m	Spanish
Juan	BW	5y	5y 2m	Spanish
Adan	BW	4y 8m	4y 9m	Spanish
Jose	BW	5y	5y 2m	Spanish
Caleb	BW	4y 6m	4y 8m	Spanish
Alfonso	BW	4y 8m	4y 10m	Spanish

*Birthdates for some children were unavailable.

Settings and Materials

The participants were recruited from six preschool classrooms in three schools, in a mid- Atlantic, urban school district. The district’s preschool program is a state funded initiative designed to reduce disparities among young children as they enter kindergarten and to reduce the risk associated with “homelessness, poverty, underemployment, incarceration of a parent, health or developmental problems, and dual language learning” and which can lead to academic failure (Virginia DOE, 2012).

The participating school district adopted the High Scope preschool curriculum. High Scope is a research-based preschool curriculum which focuses on 58 developmental

milestones in 8 content areas. The curriculum is based on adult-child interaction, in a developmentally appropriate learning environment, and a consistent daily routine. The eight content areas are: (1) approaches to learning, (2) social and emotional development, (3) physical development and health, 4) language, literacy, and communication, (5) mathematics, (6) creative arts , (7) science and technology, (8) social studies. The language, literacy, and communication area focuses specifically on describing objects, events, and relations; listening to stories and poems; making up stories and rhymes; talking with others about personally meaningful experiences; writing in various ways; reading storybooks, signs and symbols, and one's own writing; and dictating stories (High Scope Educational Research Foundation, 2013). Study participants received the regular classroom literacy curriculum. The curriculum is aligned with *the Virginia Foundation Blocks for Early Learning (Virginia DOE, 2007)*. The *Foundation Blocks*

establish a measurable range of skills and knowledge essential for four-year-olds to be successful in kindergarten. The purpose of the *Foundation Blocks* is to provide early childhood educators a set of comprehensive standards with indicators of success for entering kindergarten derived from scientifically-based research. They reflect a consensus of children's conceptual learning, acquisition of basic knowledge, and participation in meaningful and relevant learning experiences (p. 7).

In 2012, the district reported 23,649 children in kindergarten through grade 12 in 46 schools. Additionally, there are three preschool centers which provide early childhood education to 630 four- and five-year olds. The population presents diverse racial and ethnic make-up including 80% African-American, 9 % White, and 9 % Hispanic. District-wide, 75% qualified for free or reduced lunch in 2010 (School Division Data, 2012). The district operates Head Start and State-funded Preschool Initiative programs in seven elementary schools and three preschool centers. This study took place in one elementary school and two preschool centers which are highly populated with Hispanic students.

Fifteen age-appropriate storybooks were used in the intervention (Appendix B). The books also were chosen because they had bright, colorful pictures, engaging storylines, and for some, strong rhyming patterns. Seven of the books were written originally in Spanish. The Spanish alphabet books were chosen to be sure to include letters and sounds that are present in Spanish language but not in English. For example, the alphabet books included Ll and Ñ. If books were originally written in English, the editions chosen for the current study were rewritten in Spanish and not simply translated. This provided authentic rhymes and rhyming patterns. The target letters were chosen for their high rate of occurrence as initial letters in Spanish words (Rinza, Flores, Mauricio, & Antonio, n.d.). Target letters were printed in large, uppercase font on at least one page in the book and DR strategies to engage the child with this letter were used on that (those) page(s).

Procedures

The intervention consisted of five, 20-minute sessions of shared reading each week for six weeks. The interventionists, who are bilingual Spanish-English research assistants, read to the children one-on-one using Spanish language storybooks. The students followed a guide which was based on the training session to provide explicit instruction in phonological awareness and alphabet knowledge skills embedded in the Dialogic Reading strategies. (See Appendix C).

All of the shared-reading experiences took place in the children's schools during regular attendance hours and academic terms. The interventionists met with the children one-on-one in a quiet location outside of the regular classroom to avoid distractions and to allow the child to fully engage in the reading process. All communications between the child and the interventionists occurred in Spanish. In the baseline condition, the interventionist read to the child without prompting or questioning. During the intervention phase, the interventionist sat in close proximity to the child and encouraged the child to hold the book and turn pages. The interventionist used DR strategies to provide instruction in letter names and sounds, initial letter sounds, and rhyming. Target letters and words for each book were incorporated into DR strategies and used in follow-up questions. Daily probes consisted of 8 to 15 researcher developed questions designed to assess the participants' ability to name beginning letters, identify and/or produce initial letter sounds, and identify and/or produce rhyming words. The questions were typed and placed in pockets in the back of each book for use following the reading session. (See

Appendix D). The intervention was adapted from a study by Justice, Kraderavek, Bowles, and Grimm (2005). In the original study parents implemented the reading intervention in the home with their children who had specific language impairments. They did not use any special reading strategies and they conducted brief assessments of early literacy skills following each reading session. The current study used Dialogic Reading and embedded instruction throughout each book. The children had brief instructional experiences during the reading sessions prior to administration of the daily tests of early literacy skills.

The pre- and post-testing took place outside the normal classroom in a quiet location with the child and the tester seated face-to-face in child-sized chairs at a small table. The tester followed the training procedures and the instructions given in the *GRTR User's Manual* (Whitehurst & Lonigan, 2009). One person tested the child in English and a different person administered the assessment in Spanish on a different day. (See Appendix E).

The pre- and post-tests of emergent literacy skills were conducted in English and Spanish by other research assistants who are fluent in Spanish and trained to administer one-on-one assessments to young children. Students were trained by the researcher to administer the assessments. Training included building rapport with young children, positioning of the testing materials, practicing the reading guide, scoring, and recording the children's answers.

Two of the research assistants, who were native Spanish speakers, provided interpretation for all face-to-face meetings between the researcher and the participants'

families and conducted the informed consent process. The informed consents and parent questionnaires were translated and back-translated by certified translators.

Training

Whitehurst et al. (1988) addressed the issue of participatory reading with a reading technique designed for use with preschoolers. The interventionists in the current study used the Dialogic Reading strategies PEER and CROWD to maximize child participation in the shared- reading experience and to embed phonological awareness and alphabet skills. The guided intervention for the current study was adapted from the *Read Together, Talk Together (RTTT)* program for dialogic reading (RTTT; Pearson Early Learning, 2002). The reading intervention was provided by research assistants who are university students and fluent in Spanish. The six research assistants who provided the intervention all are pursuing majors or minors in Spanish and four are also earning certificates in translation and interpretation. Four are native Spanish speakers who have come to the U. S. from a variety of Central and South American countries. The assistants were trained by the researcher to use Dialogic Reading and the embedded instruction. They met with the researcher and received instruction in Dialogic Reading theory and strategies. Instruction included the PEER and CROWD strategies as well as instruction in print awareness. In addition, adult-child interactive reading techniques were modeled including shared affect and proximity of the child to the reader and to the book. The researcher modeled the techniques and each assistant practiced in the role of adult and child using DR. The researcher provided prompting, correction, and feedback as necessary. The next step in training was instruction in emergent literacy including letter

names and sounds, initial letter sounds, and rhyming. Following instruction in emergent literacy, the interventionists practiced embedding the skills in DR strategies. Once again, the researcher provided feedback and adjustment as needed. Encouraging scaffolded interactive practices during shared reading has been shown to support emergent literacy.

Measures

Pre- and post-tests of children's early literacy skills were measured using the *Get Ready to Read Screening! Tool - revised*, English and Spanish versions (GRTR-E/GRTR-S; Whitehurst & Lonigan, 2009). Intervention fidelity was measured using a researcher developed checklist adapted from the *Adult Child Interactive Reading Inventory (ACIRI)*; DeBruin- Parecki, 2007) (See Appendix F). *GRTR* (Whitehurst & Lonigan, 2001) is a research-based screening tool developed for use with preschool children ages four to six years. It is intended to determine a child's readiness to read and to identify children who need help acquiring emergent literacy skills. The 25 question assessment covers visual and auditory items including print knowledge, book knowledge, phonological awareness, phonics, and writing. It is designed to assess children from a wide range of socio-economic backgrounds and can be administered by non-professionals. Scores range from 0 to 25 and are grouped and ranked in four categories as "very weak skills" (0-4) to "very strong skills" (21-25). Performance levels of below average, average, and above average are based on a child's raw score and age at time of testing. There are six 6-months age categories from three years to five years, eleven months. *GRTR* is available in Spanish, Arabic, Korean, and Chinese (*GRTR-E/GRTR-S*, 2001).

The implementation fidelity measure is a 10-item checklist which is adapted from the *Adult-Child Interactive Reading Inventory (ACIRI)*; DeBruin- Parecki, 2007) and which assesses the adult behavior during a shared-reading experience. The first five items refer to fidelity to the reading guide and general shared-reading behaviors associated with dialogic reading such as, maintaining close proximity, shared positive affect, and engaging the child in page-turning. The next five items refer to the specific behaviors associated with the embedded instruction in letter name and letter sound knowledge, and phonological awareness.

Experimental Design

The study used a single subject with multiple baselines across subjects experimental design. Participants who met the home language requirement and who provided parental consents were included in the study. The participants received the intervention while also receiving the normal, High Scope classroom curriculum. All participants received pre- and post-tests of emergent literacy skills, both in Spanish and English.

Baseline. During the baseline condition, the students read Spanish language storybooks to the participants without any prompting, clarification, elaboration, or instruction. Each book-reading session was followed with a short questionnaire about target letter names and sounds and target rhyming words for that day's book.

Intervention. The intervention consisted of a book-reading session in Spanish in which DR strategies were adapted to embed instruction in emergent literacy skills. Interventionists used prompting and questions about the target letters and words, and

extensions of the children's answers to embed instruction in alphabet knowledge and phonological awareness in the sessions. At the end of each reading session, the interventionist assessed the child's skills using the prepared questions in the back of each book.

The first group of five children received the intervention after three sessions in the baseline condition. When the other two groups had completed five reading sessions in the baseline condition, the research assistants introduced the intervention to the second group of five. The first group continued with the intervention and the third group of five children continued in the baseline condition. Following nine reading sessions in the baseline condition, the third group of students received the intervention treatment. At this point, all three groups received the treatment for the remaining nine reading sessions.

Data Collection and Analysis. Daily reading assessments were completed for each child in both phases of the study by the reading interventionists. The interventionists asked questions from the probes and wrote the children's answers on the papers provided. The child's answers were recorded daily. The assessments were scored by two independent research assistants and the percent of correct answers was calculated for each probe. In the event of a lack of agreement between the two scorers, the researcher discussed their respective concerns and made a decision about the final score. Baseline and intervention data were entered into an Excel spreadsheet. The data were displayed as multiple baselines across subjects graphs, also using the Excel spreadsheet program. Visual analysis of the graphs yielded information about level (mean), trend (slope and magnitude), variability (from the mean), and immediacy of response to the intervention

(Kennedy, 2005). Additionally, individual and group percentages of non-overlapping data (PND) were calculated (Mastropieri & Scruggs, 1987). The PND considers the number of intervention data points that do not overlap the baseline condition and is used as an effect size estimate in single subject research design.

The pre- and posttests of emergent literacy skills were administered in English and in Spanish during the first week of baseline condition and the last week of intervention. Scores from before and after the intervention were analyzed using paired-samples *t*-tests. In addition, the individual and group changes from pre- to posttests were analyzed.

Treatment Fidelity. To ensure treatment fidelity, the researcher conducted unannounced observations of the intervention phase reading sessions. A checklist, adapted from the ACIRI (DeBruin- Parecki, 2007) was used to document fidelity to the reading guide. The 10-item checklist assessed the adult shared-reading behaviors including fidelity to the reading guide, general shared-reading behaviors associated with dialogic reading, and the embedded instruction in letter name and sound knowledge and phonological awareness (see Appendix F).

Social Validity. At the end of the study, teachers and parents were asked to complete a survey of their perceptions of the utility and impact of the study (see Appendices G & H). They were asked to rate the convenience of the intervention, the perceived impact on the children's language and literacy in L1 and L2, and their willingness to have students participate in such a study in the future. Both surveys

consisted of seven Yes/No questions and opportunities to elaborate on answers or add comments.

Delimitations

The participants in this study are the children of immigrants from a variety of Spanish-speaking countries. They were born in the home country of their families or in the United States and have been exposed to varying degrees of English depending on when they were first exposed, how often they watch English language television, how long they have attended an English immersion preschool, and the extent of their exposure to English in community settings. All participants are enrolled in the [State's] Preschool Initiative and thus the families meet the income requirement. The results of this intervention may not be reflective of the general population of young DLLs.

Chapter Four

Results

The purpose of this study was to investigate the effects of explicit code-based instruction, embedded in Dialogic Reading (DR) within the home language context on young dual language learners' (DLL) emergent literacy skills. Young DLLs engaged in shared-reading experiences in Spanish with adult bilingual interventionists who were university students. The interventionists used DR strategies to provide instruction in letter names, initial letter sounds, and rhyming. Single subject multiple baseline design across subjects was applied to address the three research questions. The effects of phonological awareness instruction embedded in Dialogic Reading (DR) strategies were assessed using short question and answer probes daily following each reading session.

In the baseline condition, the interventionist read to the participants without Dialogic Reading strategies or embedded instruction on emergent literacy skills. The intervention was implemented with three groups of five participants, with a total of 15 participants. Before the intervention was introduced, all three groups were observed in the baseline condition. Then the intervention was introduced to the first group of five participants while the other two groups remained in the baseline condition. After five more baseline sessions, the second group of five participants received the intervention while the third group remained in the baseline condition and the first group continued with the intervention. After the second

group received five treatment sessions, the intervention was introduced to the third group of five participants while the first and the second groups continued with the intervention. As a result, the first group of five participants was in the baseline condition for three sessions; the second group of five remained in the baseline condition for five reading sessions; the third and final group of five remained in the baseline condition for nine sessions. For the intervention, research assistants (interventionists) read to the participants using DR strategies to embed emergent literacy instruction in the storybooks. Target letters and words were identified for each book. The participants were given short test probes in which they were asked to identify and produce rhyming words and beginning letter names and sounds for the targets. The percent of correct answers was charted and the resulting graphs were analyzed using visual analysis techniques (Barlow, Nock, & Hersen, 2009; Kennedy, 2005).

The data were entered into a spreadsheet and graphs were produced using Excel 2007. Visual inspection of the graphs used to analyze the data included within-phase and between-phase analysis of trend, level, variability of data, and immediacy of response (Barlow et al. 2012; Kennedy, 2009). Trend is a measure of the magnitude and directionality of the ordinary least squares regression line. The level of each phase and the change in level between phases is determined by calculating the means. Variability describes the degree of deviation of individual data points from the best fit or trend line. The speed with which the level and trend may change upon introduction of the intervention is the immediacy of response. The strength of the functional relation

between the dependent and independent variables may be indicated by the immediacy of effect (Barlow, Nock, & Hersen, 2009; Kennedy, 2005).

Results relevant to each research question are reported below.

Research Question 1

Does Dialogic Reading in young DLLs' home language (L1) improve their phonological awareness skills and alphabet knowledge in L1 (Spanish)?

Overall Results. Visual analysis of the graphs on test scores of emergent literacy skills of all the 15 participants showed that levels increased for all participants from baseline to intervention phases. The increases ranged from 19% to 89% with a mean increase of 54% (SD = 17.5%). Eleven of the participants showed moderate to high immediacy of response to the intervention. Ten data sets continued an upward trend or changed from downward to upward direction following introduction of the reading intervention. Variability across phases remained unchanged in seven data sets (high or moderate). Eight data sets showed changes in variability from low to moderate or high.

Group Results. The three intervention groups were grouped together according to the school they attended. All three groups showed increases in level, 55%, 58%, and 34%, and percents of non-overlapping data (PNDs) were 100, 100, and 78, respectively (see Table 3). Groups One and Two displayed low to moderate variability in both phases, while the data for Group Three was highly variable in both phases. Immediacy of response was moderate to rapid for participants in the first intervention group; the subsequent two groups showed an overall rapid response to the intervention.

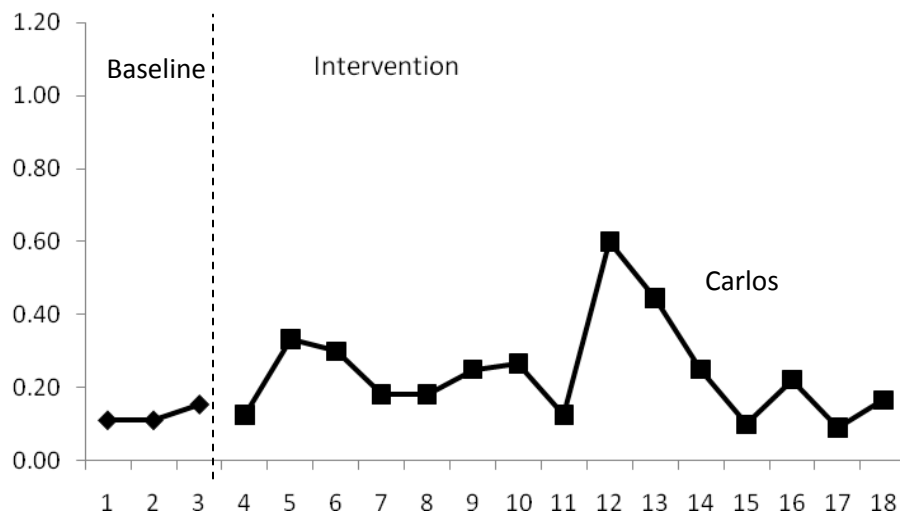
Table 3. Across-phase Change in Level and Percent of Non-overlapping Data by Group

Participant Group	Level M (SD)	Change in level %	Percentage of Non- overlapping data (PND)
Group 1	0.15 (0.06)- 0.33 (0.08)	55	100
Group 2	0.19 (0.16) - 0.45 (0.23)	58	100
Group 3	0.33 (0.2) - 0.50 (0.2)	34	78

Individual Results. As mentioned earlier, the first group of five participants received the intervention after three reading sessions in the baseline condition. Baseline data for all participants were low and stable. The initial slopes were downward or moderately upward. All intervention phase data increased in level across phases and developed a high degree of variability. The directionality of three trend lines remained unchanged from baseline to intervention and one turned downward. The immediacy of response to intervention was moderate to high in all cases.

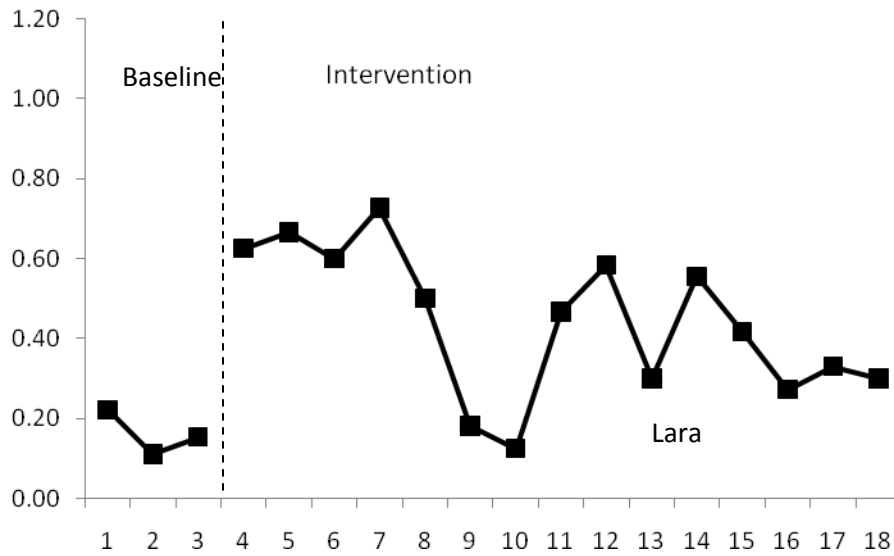
As Figure 3 showed, Carlos's baseline data were stable with low variability and a moderate upward trend. The baseline mean was 0.13(0.10). Her response to the intervention was moderate, occurring after one reading session. The intervention phase showed a high degree of variability and a change to a slight downward trend. There was a slight change in mean level to 0.24(0.14), an increase of 46%.

Figure 3. MBD Graph - Carlos



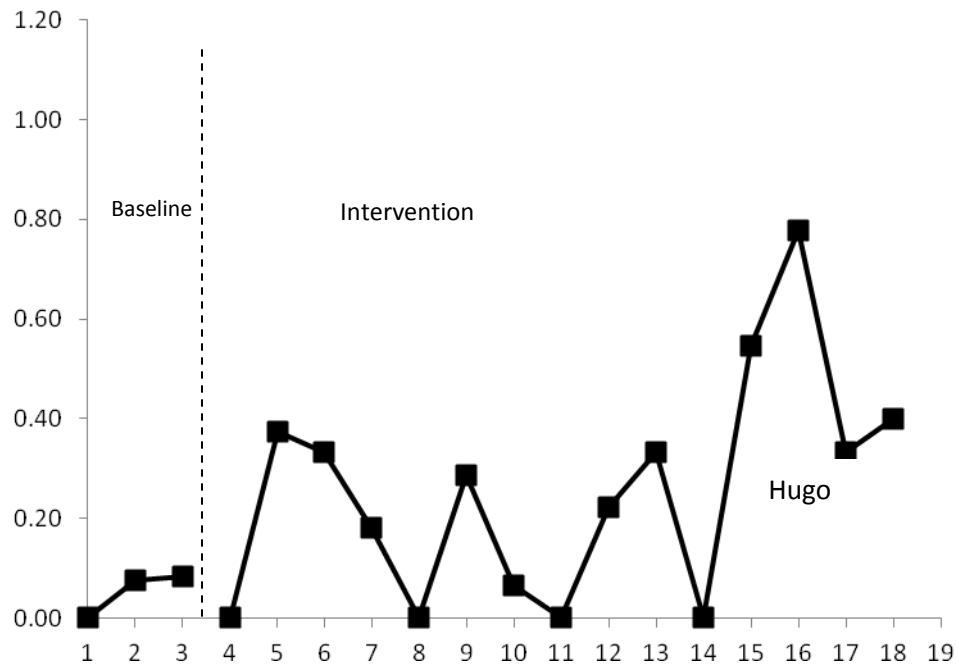
Lara's baseline performance data trended downward with low variability (Figure 4). The level was 0.16(0.06). The response to intervention was immediate. The intervention data mean level was 0.44(0.18) and increase of 64% over baseline. The trend remained at a moderate downward slope and variability increased.

Figure 4. MBD Graph - Lara



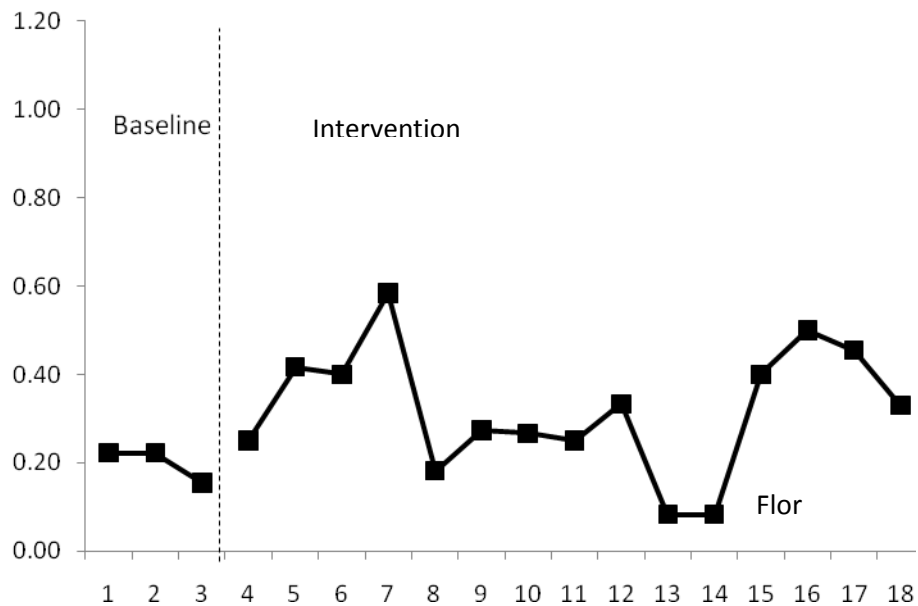
As shown in Figure 5, baseline data for Hugo has a low degree of variability. The slope was moderately upward and the mean level was 0.05 (0.05). The response to intervention occurred after one book-reading session. Intervention data reached a mean level of 0.26(0.23), an increase over baseline of 81%. The intervention date maintained an upward slope and the degree of variability increased.

Figure 5. MBD Graph - Hugo



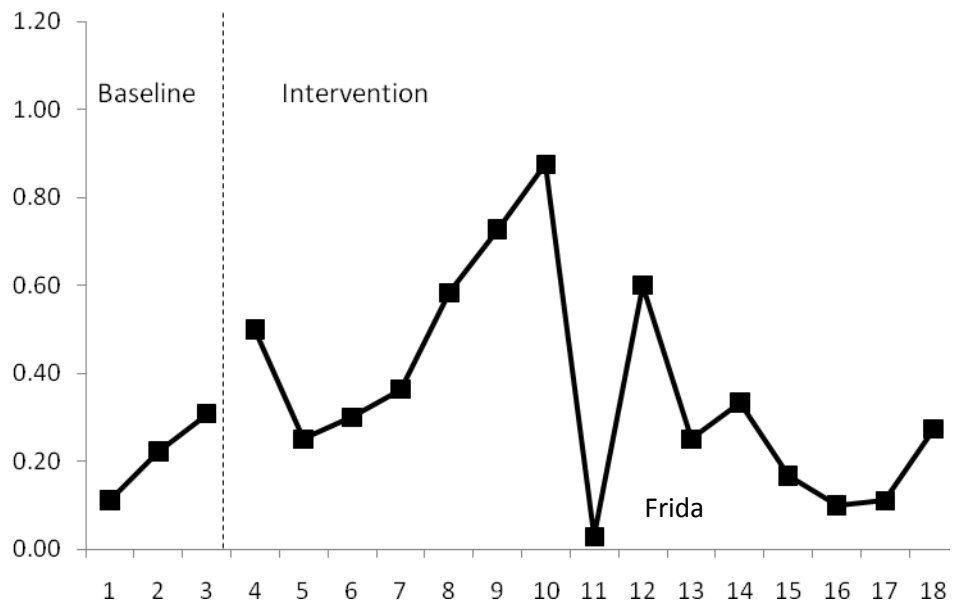
Baseline data for Flor showed a low degree of variability and a moderate downward slope (Figure 6). Flor's response to intervention was immediate. The slope increased in magnitude and changed to an upward direction; the resulting slope was zero. The mean level of data increased from baseline to intervention by 38% from 0.20(0.04) to 0.32 (0.14).

Figure 6. MBD Graph - Flor



Initial data for Frida had a baseline level of 0.21, a moderate upward slope and low variability (Figure 7). Frida's response to intervention was moderate, occurring after one reading session. The intervention mean level was 0.36 (0.25) and had a low magnitude downward slope. There was a higher degree of variability in the intervention data than in the baseline data.

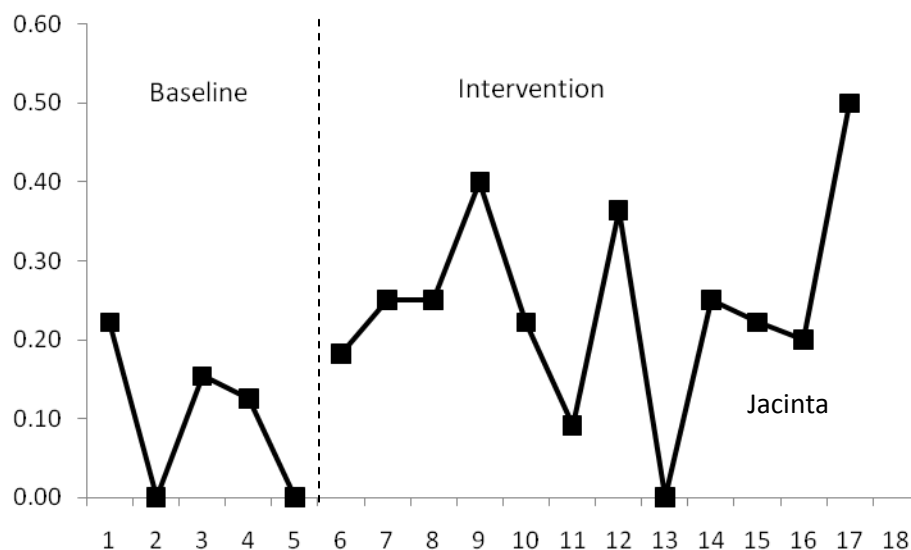
Figure 7. MBD Graph - Frida



The second group of five participants remained in the baseline condition for five book-reading sessions before they received the intervention. Overall, the graphs indicated across- phase increases in levels, moderate to high rates of response to intervention, and moderate to high variability in intervention data. With one exception the trends maintained an upward direction during the intervention phase.

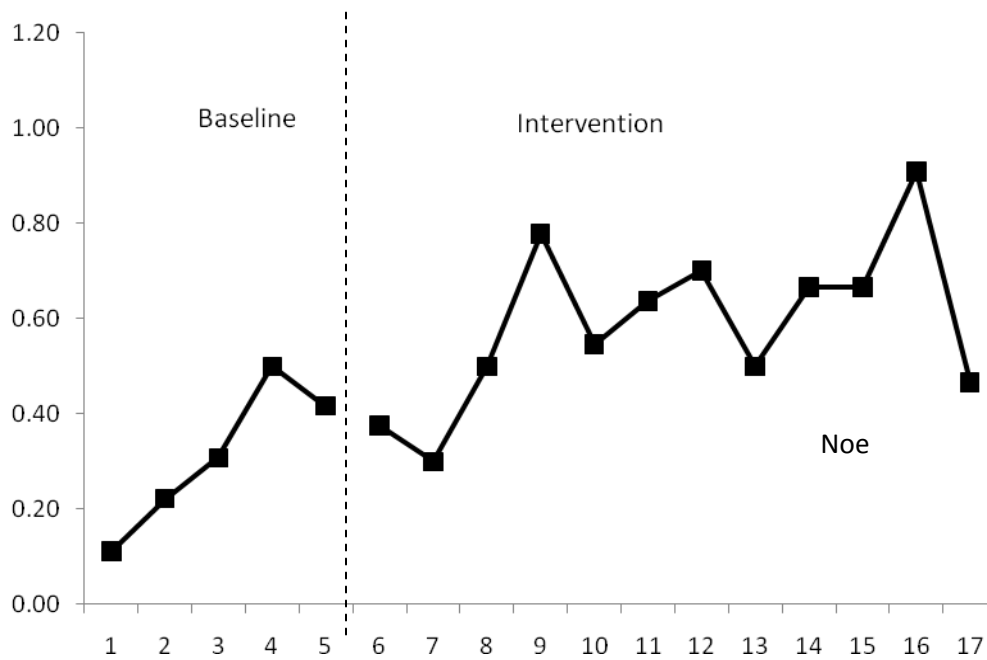
As shown in Figure 8, Jacinta’s mean performance data during the baseline phase reached a level of 0.10 (0.10) and the trend in performance had a moderate downward slope. Response to the intervention was immediate resulting in a low magnitude upward slope. The data have a high degree of variability. The intervention phase mean was 0.24 (0.13). Overall, the change in level from baseline to intervention phase was 0.14 or an increase of 58%.

Figure 8. MBD Graph - Jacinta



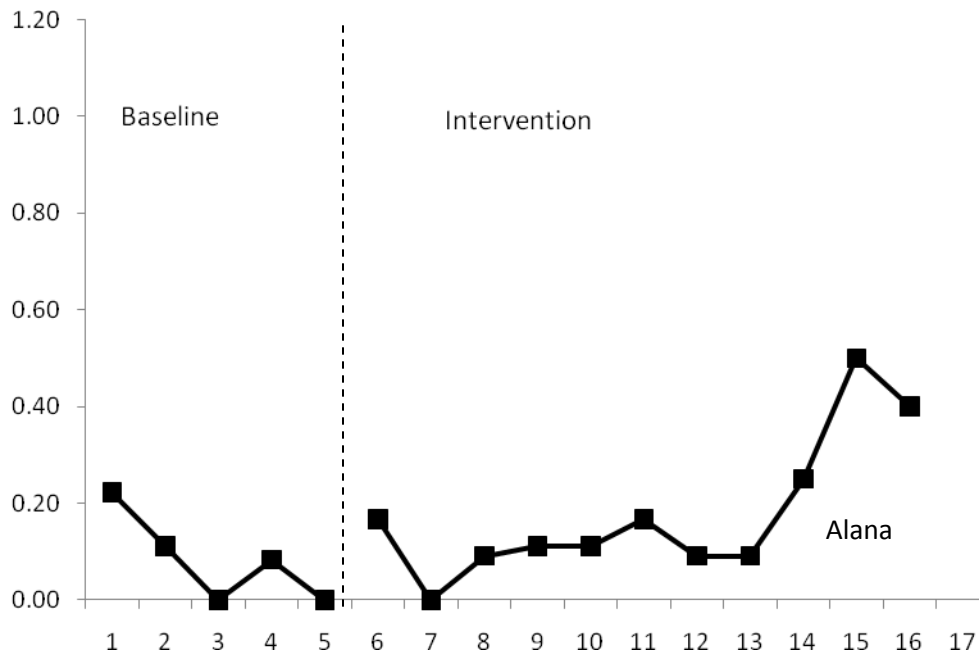
Noe's performance data is shown in Figure 9. During the baseline phase, the trend showed a moderate upward slope with low variability. The level was 0.31(0.15). Noe's response to the intervention was slow. After two reading sessions the intervention phase showed a gradual, upward slope with moderate variability. The intervention slope, while remaining positive, has a lower magnitude than the baseline slope. The level of the intervention phase was 0.59(0.17) and the change in level from baseline to intervention was 0.28, an increase of 47%.

Figure 9. MBD Graph - Noe



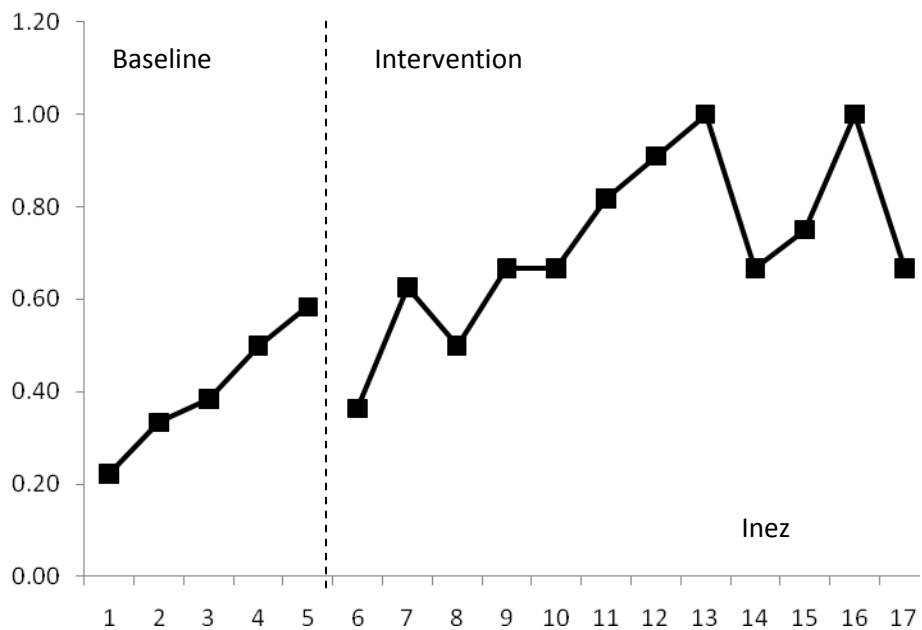
Alana's data during the baseline phase, shown in Figure 10, had a moderate downward slope with low variability. The response to the intervention was immediate, starting a moderate upward trend with moderate variability and reaching a level of 0.18(0.15). The level changed between phases from 0.08 to 0.18, an increase of 56%.

Figure 10. MBD Graph - Alana



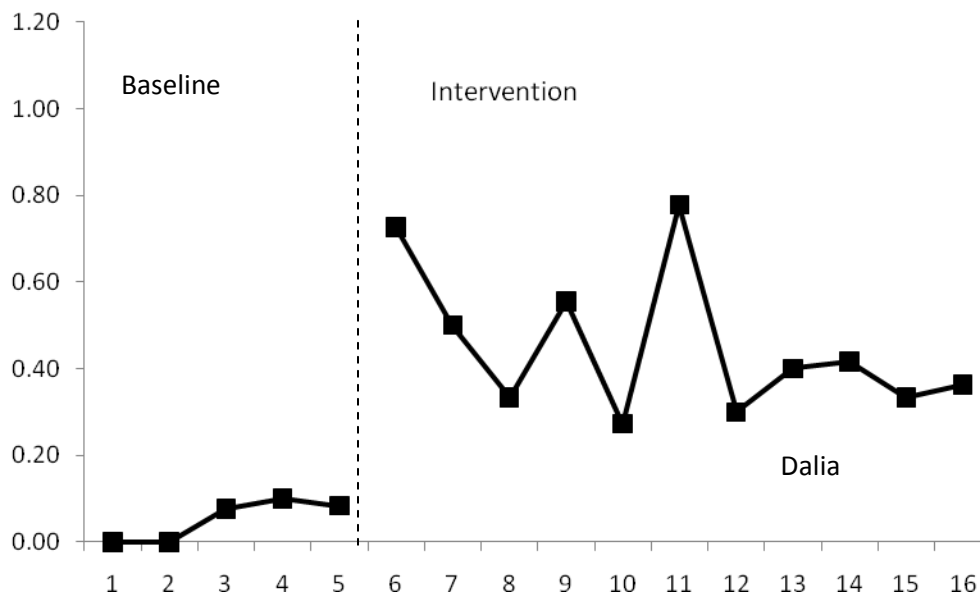
Inez's baseline data (Figure 11) showed low variability, a moderate upward trend, and a mean level of 0.40(0.14). Her response to the intervention was moderate, occurring after one intervention phase reading session. The intervention trend continued upward but with a smaller magnitude and greater variability than what was seen in the baseline. The intervention mean level of 0.72(0.19) reflects an increase of 0.32 or 44%.

Figure 11. MBD Graph - Inez



As shown in Figure 12, Dalia’s baseline performance data showed low variability and trended slowly upward reaching a mean level of 0.05(0.05). His response to the intervention was immediate. The introduction of the intervention resulted in a level change of 92%. The trend shifted to a moderate downward slope and the data shown higher variability than in baseline.

Figure 12. MBD Graph - Dalia

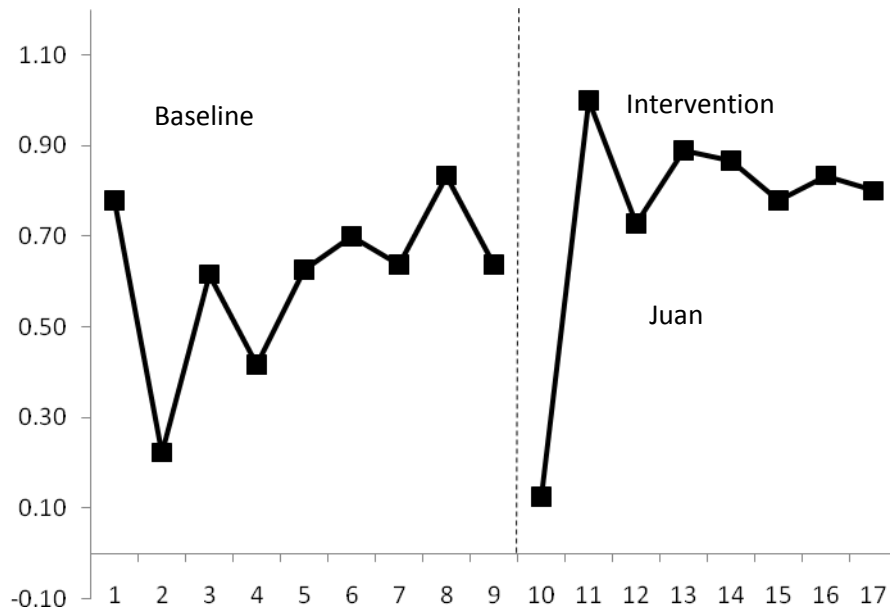


The third group of five participants remained in the baseline condition for nine book-reading sessions before they received the intervention. The data for this final intervention group showed increases in level across phases for all participants. With one exception, the trends reversed to or maintained an upward slope of moderate to high

magnitude. Four of the five participants responded to the intervention with moderate to rapid immediacy of response.

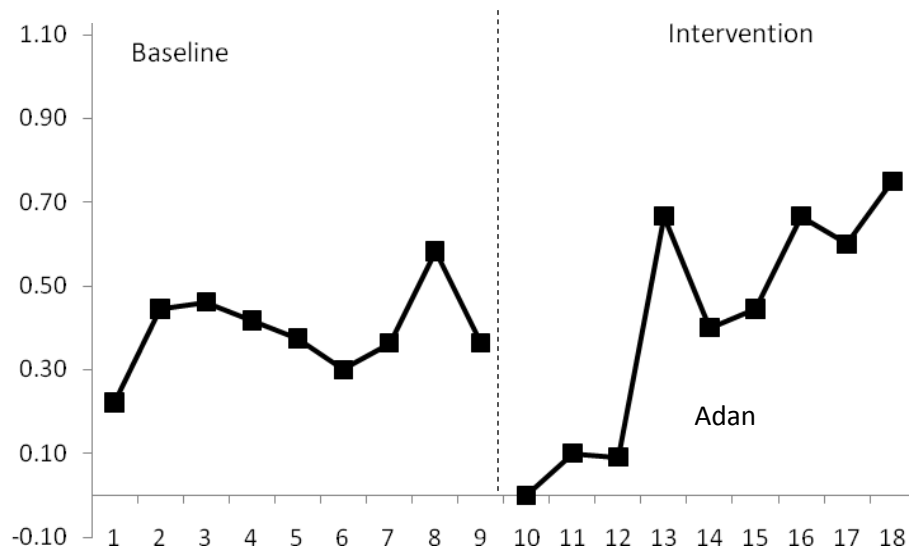
Baseline data for Juan has a high degree of variability and a moderate upward slope. Response to intervention was immediate (Figure 13). The first two intervention data points fluctuated from an overall low of 0.13 to an overall high of 1.00. By the third reading session, the data were more stable, although overall they were highly variable. The mean level increased from a baseline level of 0.61 (0.19) to an intervention level of 0.75 (0.27), an increase of 19%. The intervention slope was upward and has a magnitude somewhat greater than the baseline trend.

Figure 13. MBD Graph - Juan



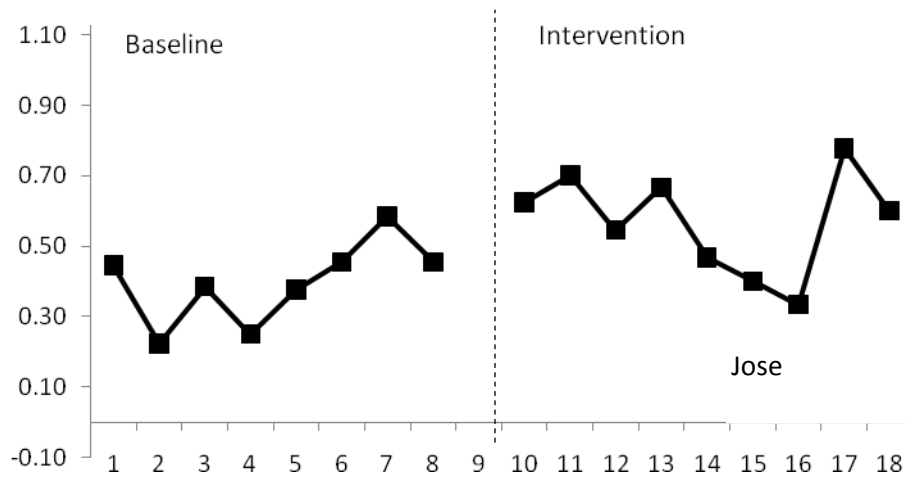
As shown in Figure 14, Adan's baseline data had a moderate degree of variability. The level was 0.39(0.10) and slope had a low magnitude upward trend. Response to the intervention was immediate. Initially, the level was low, but after three reading sessions the data returned to baseline levels and then continued upward. The trend of the intervention data was moderately upward, steeper than the baseline trend. The change in level was 0.02 (5%).

Figure 14. MBD Graph - Adan



Jose's baseline performance data trended upward with a moderate magnitude. The data were highly variable and have a mean level of 0.40 (0.12) (Figure 15). His response to the intervention was immediate. Intervention data were still highly variable. The mean level was 0.57 (0.15) and the slope was slightly downward. Overall the mean level increased by 30%.

Figure 15. MBD Graph - Jose



As shown in Figure 16, the baseline data for Alphonso trended moderately upward and had a high degree of variability. The mean baseline level was 0.11 (0.10). Alphonso's response to intervention was moderate. The intervention data show a high degree of variability and trend moderately upward. Alphonso's level of performance increased by 52% to 0.23 (.17).

Figure 16. MBD Graph - Alphonso

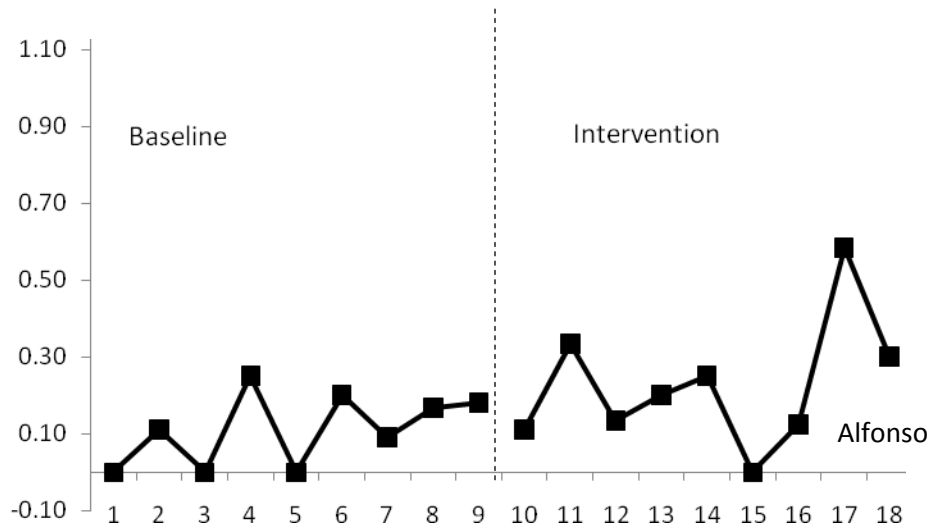
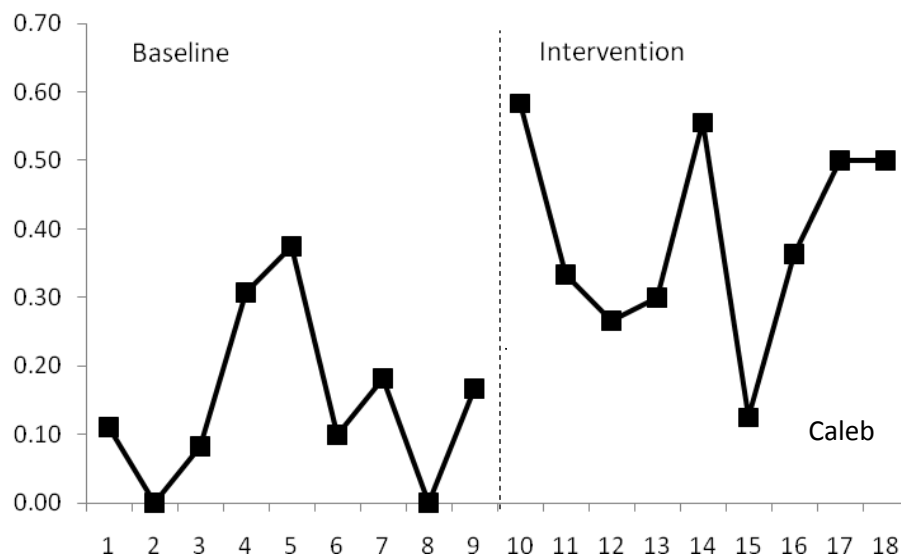


Figure 17 showed that Caleb’s baseline data were highly variable ranging from 0.00 to 0.38. Immediacy of response was rapid and the trend was slightly upward. The change in level between phases was 0.24, a 62% increase. The variability remained high; the slope continued to trend upward and the magnitude change was negligible (0.0031 to 0.0035).

Figure 17. MBD Graph - Caleb



Estimate of Effect Sizes

An estimate of the effect size was calculated using percentage of non-overlapping data (PND; Mastropieri & Scruggs, 1987) (See Table 4). To calculate PND, the highest data point in the baseline was identified then the percentage of data points exceeding this

level during intervention phase was determined (Scruggs, Mastropieri, & Casto, 1987). Mastropieri and Scruggs have reviewed PND extensively since introducing it in 1987. Numerous studies have shown a “clear and tangible relation between PND and effect magnitude” (Scruggs, Mastropieri, 2012).

Table 4. Across-phase Gains and Percent of Non-overlapping Data

Child	Baseline Mean 1 (SD1)	Intervention Mean 2 (SD2)	% of gain	PND
Jacinta	0.10 (0.01)	0.24 (0.21)	58	50
Noe	0.31(0.15)	0.59 (0.17)	47	58
Alana	0.08 (0.09)	0.18 (0.15)	56	27
Inez	0.40 (0.14)	0.72 (0.19)	46	83*
Dalia	0.05 (0.05)	0.45 (0.17)	89	100*
Carlos	0.13 (0.02)	0.24 (0.14)	46	73*
Lara	0.16 (0.06)	0.44 (0.18)	64	87*
Hank	0.05 (0.05)	0.26 (0.23)	81	67
Flor	0.20 (0.04)	0.32 (0.14)	38	80*
Frida	0.20 (0.10)	0.36 (0.25)	44	47
Juan	0.61 (0.19)	0.75 (0.27)	19	38
Adan	0.39 (0.10)	0.41 (0.29)	5	44
Jose	0.40 (0.12)	0.57 (0.15)	30	56
Caleb	0.15 (0.13)	0.39 (0.15)	62	44
Alphonso	0.11 (010)	0.23 (0.17)	52	33

*PND is considered “effective” or “very effective”.

Pre- and post-tests

In addition to the ongoing data that were collected immediately after each session, pre- and post-tests of emergent literacy skills were administered to all children. *The Get Ready to Read Screening Tool-revised* (Whitehurst & Lonigan, 2009) was administered in Spanish and in English on different days for each child during the first week of

baseline condition and the last week of the intervention condition. Scores were recorded then analyzed using the SPSS Statistics 20. Paired-samples *t*-tests were used to compare the mean scores in English and in Spanish as well as the growth in emergent literacy skills in each of the two languages following the reading intervention.

A paired-samples *t*-test was conducted to compare scores on tests of Spanish language emergent literacy skills before and after the intervention. There was a significant difference in the scores for pre-intervention ($M= 12.69$, $SD=4.07$) and post-intervention ($M= 17.69$, $SD= 5.82$); $t(12) = 4.604$, $p = .001$. These results suggested that the intervention may have enhanced the participants' Spanish emergent literacy skills.

Research Question Two

Does Dialogic Reading in young DLLs' home language (Spanish, L1) improve their phonological awareness skills and alphabet knowledge in English (L2)?

A paired-samples *t*-test was conducted to compare scores on tests of English language emergent literacy skills before and after the intervention. There was a significant difference in the scores for pre-intervention ($M= 10.87$, $SD=3.11$) and post-intervention ($M= 13.47$, $SD= 5.01$); $t(14) = 2.628$, $p = .02$. These results suggested that an intervention in Spanish may have increased the participants' English language emergent literacy skills.

Table 5 Means and Standard Deviations for Pre- and Post-tests

	Means	Standard Deviations
English Pre-test	10.87	3.11
English Post-test	13.47	5.01
Spanish Pre-test	12.69	4.07
Spanish Post-test	17.69	5.89
Change in English	2.46	4.11
Change in Spanish	5.0	3.92

Research Question Three

Does Dialogic Reading in young ELLs' home language result in a different rate of growth in L1 and L2 skills?

A paired-samples *t*-test was conducted to compare the changes in scores on tests of English and Spanish language emergent literacy skills from pre- to post-intervention. There was no significant difference in the change for English scores ($M = 2.46$, $SD = 4.11$) compared to the change in Spanish scores ($M = 5.0$, $SD = 3.92$); $t(12) = 1.91$, $p = .08$. These results suggested that the intervention which was provided in Spanish increased the participants' emergent literacy skills in English and Spanish at similar rates.

Social Validity

The six classroom teachers were given a survey at the end of the intervention; five returned completed surveys (83%). (See Appendix G). They were asked about the children's reactions to the study experience, any differences they noted in the children's language usage, and their impressions of the study process. The survey had six Yes/No questions and each question provided an opportunity for the teacher to comment. The results are provided in Table 5.

The parents of the participants were asked to complete a brief survey at the end of the study (see Appendix H). Fourteen parents received the survey and nine returned completed forms (64%). The survey asked about the children's response to the reading sessions, the parents' reasons for having their children participate, and any changes in language use that the parents had noticed since the sessions began. Parents were asked to respond to the questions by circling Yes or No and they were provided opportunities to comment on several of the questions. The results are provided in Table 6.

Table 6 Teacher Social Validity Results

Teacher responses → Questions ↓	% Yes	% No
Did the children who participated appear to enjoy the experience?	100	0
Was this study helpful to the students who participated?	100	0
Did you notice a difference in some of the emergent literacy skills displayed in your classroom by the study participants?	100	0
Was the research study disruptive of your daily routine in the classroom?	50	50
Would you like for your DLL students to participate in a similar study in the future?	75	25
Would you like to know more about the intervention that was used in the study with dual language learners?	100	0

Table 7 Parent Social Validity Results

Teacher responses →		
Questions ↓	% Yes	% No
Did the children who participated appear to enjoy the experience?	100	0
Was this study helpful to the students who participated?	100	0
Did you notice a difference in some of the emergent literacy skills displayed in your classroom by the study participants?	100	0
Was the research study disruptive of your daily routine in the classroom?	50	50
Would you like for your DLL students to participate in a similar study in the future?	75	25
Would you like to know more about the intervention that was used in the study with dual language learners?	100	0

Chapter 5

Discussion

The purpose of this study was to examine the effects of a reading intervention in Spanish (L1) on the Spanish and English (L2) emergent literacy skills of young dual language learners (DLLs). Shared, interactive storybook reading has been shown to benefit the development of oral language skills among young children from a variety of backgrounds and with various first languages and some disabilities (Crain-Thoreson & Dale, 1999; Lonigan & Whitehurst, 1998; Valdez-Manchaca & Whitehurst, 1992; Whitehurst, et al., 1988). But, for young DLLs, instruction in oral language may not be enough. It may be beneficial to provide explicit instruction in early literacy skills as well (August & Shanahan, 2004). In the current study, alphabet knowledge (AK) and phonological awareness (PA) skills were embedded in Dialogic Reading (DR) strategies during shared storybook reading sessions in the children's home language. A single subject multiple baselines across subjects research design was used. Children's AK and PA skills were measured and recorded daily. The overall results of the study indicated that the intervention improved children's emergent literacy skills in L1-the language of instruction, and may have positive implications for the acquisition of L2. Gains in both languages for the study participants were equivalent.

The study used a single subject design in which the participant's baseline condition serves as the "control" and the intervention serves as the "experiment"

(Holcomb, Wolery & Gast, 1994). Participants initially were monitored in the baseline condition. That is, the interventionists read storybooks in Spanish with no enhancements such as prompting or expansions. When they moved to the intervention phase, the children participated in joint reading sessions in which emergent literacy instruction was embedded in DR strategies. The children were given brief assessments of their skills following each session of both phases, baseline and intervention, and the scores were recorded and graphed. Changes in components of the graphs across phases are important indicators of effectiveness. For example, the trend line is indicative of the progress a participant is expected to make should the current condition continue. A change in the direction or slope of the trend line across phases indicates a response to the intervention. A change in the level or mean across phases may also be meaningful.

Teaching L1 Skills

Research Question One: Does instruction embedded in Dialogic Reading in young DLLs' home language (L1) improve their phonological awareness skills and alphabet knowledge in L1 (Spanish)?

The data indicate that all participants made significant gains in emergent literacy skills during the six week intervention. The means from baseline condition to intervention increased for all 15 children. Results from pre- and post-tests of emergent literacy indicated that there was a significant increase in skill level in Spanish for the group. Upon receiving the specialized reading instruction, seven children scored higher on tests of emergent literacy and reached those levels faster than one would have expected if they remained in the baseline condition. The increase across phases ranged

from 20% to 62%. Following the introduction of the treatment there were notable changes in the trend lines for these seven participants, also. Four children, Jacinta, Flor, Alana, and Art had mean baseline scores of 20% or less and the data in baseline had a downward trend. Their initial performance reveals a low level of understanding of the core metalinguistic skills. All four showed rapid to moderate response to the intervention. During the intervention phase, their gains ranged from 5% to 58%. (See Table 4). This indicates that DR was an effective teaching strategy for children with little or no previous knowledge of the target skills; the children responded quickly and positively to the specialized instruction.

Four other children, Alphonso, Juan, Caleb, and Lara showed improvement across phases as well. Graphs of performance for Alphonso and Juan show positive trends and moderate within-phase level changes during baseline condition. Upon receiving the intervention, both children made gains in their performance on the given tasks, that is, both continued to show upward trends, but with higher slopes. The between-phase means increased for both children, that is, their scores on tests of emergent literacy increased significantly following the introduction of the treatment. A change in level is an important indicator of effectiveness in single subject research (Barlow, Nock, Hersen, 2009; Kennedy, 2005). Although the children appeared to have some knowledge of the target emergent literacy skills, they were able to improve their performance after receiving instruction with DR. The graph of Caleb's scores also shows a large increase in level and a slight increase in the slope of the trend line. It is apparent that his skill level increased as reflected in the significantly higher scores and mean level. However, the

high degree of variability in Caleb's performance in both phases makes this data inconclusive. Lara's scores indicate a low and stable knowledge of emergent literacy skills. Her response to the treatment was immediate, as her scores accelerated with the first intervention session and remained high for the duration of the study. Although her data continued to trend downward, the slope increased. During the final three sessions, her scores appeared to stabilize at a level which was higher than her baseline. The variability in scores following a stable baseline, the high level of performance in intervention phase, and the stable trend of the last five data points suggest that with extended treatment, the intervention would be an effective means of instruction for Lara (Kennedy, 2005; Tawney & Gast, 1984)

Several children made gains in mean scores, but their intervention data trended downward despite accelerating trends in baseline. Carlos and Hank had low, stable performances in baseline condition. When they received the specialized instruction their data became highly variable. Hank's scores exceeded those in baseline condition despite a downward trend. Overall the level increased 81%; the percent of non-overlapping data was 87% which is considered strong evidence of the effectiveness of the intervention. (Bellini, Peters, Benner, & Hopf, 2007). Carlos also had a low and stable baseline condition performance. His level during intervention increased by 38% and the PND was 73%. Analysis by trend would indicate that the intervention was not effective for these individuals. However, the increase in level and the PND both indicate that the treatment was effective (Scruggs, Mastropieri, & Castro, 1987). Mason (2010) suggests that single

subject graphs can be analyzed using visual analysis of trend, level, and variability, or by statistical methods such as PND.

Two additional graphs reflect interesting results. Frida and Flor are twins who attend the same school but are in different classrooms. Their pre- and post- test scores indicate they have similar skill levels. Flor's performance in baseline condition indicated a low level of knowledge of emergent literacy skills. He responded to the intervention immediately by scoring higher after the first intervention and consistently scoring higher on the end-of-session assessments. In the baseline condition, Frida's performance reflected an understanding of the component literacy skills. When DR was introduced, his scores dropped and his performance became unstable varying from the trend which was set in the baseline. It is interesting to note that Frida's teacher expressed some dissatisfaction with the daily schedule for intervention. She was concerned that Frida was missing large group time in the mornings. She asked the interventionist to change the schedule and read to Frida in the afternoon. Visual inspection of the graph shows that after an initial decrease in level, Frida began to respond positively to the intervention. In fact, the data trended upward and the slope increased to a level which surpassed the baseline mean. At session number 11, the interventionist started reading to Frida in the afternoon. His level fell to an all-time low of zero that day and the next six sessions show a high degree of variability and a downward trend. It is worth noting that the change in his performance coincides with the change in the reading schedule. It may be that the child was tired in the afternoons; he may have sensed his teacher's dissatisfaction with parts of the study; or he may not be amenable to changes in his routine. The last two

data points hint at an improvement and a possible upturn in the trend. It may be that the child's performance was affected by change and it would have returned to the upward trend he experienced in the early part of the intervention. He may benefit from extending the treatment on a consistent schedule in a comfortable and supportive environment.

The results of this study compare very favorably to others reported in the literature. The National Early Literacy Panel (NELP, 2008) reported that PA and AK are two of the strongest indicators of reading success in later years. The Report of the National Literacy Panel on Language Minority Children and Youth (NLP; August & Shanahan, 2006) and an update on that report indicated that the same instructional practices were beneficial to DLLs (August & Shanahan, 2010). They also note that reading instruction in L1 promotes reading achievement in English; and focused teaching of word level skills, particularly phonological awareness, may result in gains for DLLs which are equivalent to gains made by their native speaker (NS) peers. A large body of research informs this recommendation. Ziegler and Goswami, (2005) found that there is a similar typical developmental sequence of PA across languages, including Spanish. In particular, PA and AK skills have been shown to develop in similar manners regardless of the child's home language (Chiappe, et al., 2002). Additionally, phonological awareness and reading skills are correlated in Spanish (Carrillo, 1994). Explicit instruction in PA and AK as recommended by NELP appears to be an effective means of strengthening young DLLs skills in their home language, too.

Transference Theory

Research Question Two: Does instruction embedded in Dialogic Reading in young DLLs' home language (L1) improve their phonological awareness skills and alphabet knowledge in L2 (English)?

One goal of the current study was to identify an effective intervention which will assist young DLLs in learning English while strengthening and maintaining their home language. The report of the NLP on Language-Minority Children and Youth stated that instruction in the home language may serve as a bridge to success in English because “decoding, sound blending, and generic comprehension clearly transfer between languages that use phonetic orthographies, such as Spanish, English, and French” (August & Shanahan, 2006; p. 397). Among DLLs, linguistic cues compete to influence language development; the most salient and reliable win. DLLs who have already learned the cue system of Spanish will apply those cues to learning English (Gorman & Gilliam, 2003).

The transference theory suggests that “developing phonological awareness and word recognition skills in the first language is likely to help in second-language word recognition” (Durgunoglu, 1993). This concept was clearly supported in studies by Gurgunoglu, et al. (1993) who found that one of the best predictors of English and Spanish literacy among Spanish-speaking DLLs was their PA ability in Spanish. In a study of factors influencing English word identification, young Spanish-speaking DLLs were given tests of emergent literacy skills in both languages. Results revealed that their

level of Spanish PA was the best predictor of their English word recognition. That is, there was evidence of the transfer of PA skills from L1 to L2 (Durgunoglu, 1993).

Gorman (2012) conducted a study of Spanish L1 children who received short-term PA instruction in their home language. She found the children made direct and equivalent gains in PA in both the treated and the untreated language (English). PA tasks often involve new terminology; young DLLs may better grasp the concepts when L1 is the language of instruction. Manis, et al. (2004) also found phonological awareness and alphabet knowledge in Spanish to be predictors of first decoding in English (Manis, et al., 2004).

Results indicate the English skills of children in this study generally improved. Ten of the children showed gains on tests of emergent literacy skills ranging from one to eight points with an average increase of five points (20%) on the GRTR. Although the children were exposed to daily instruction in English in the classroom, the gains are likely due to the focused, short-term intervention (Gorman, 2012). These findings are consistent with previous research which showed that reading programs in a child's first language, particularly those which include instruction in phonological awareness, are an effective means of enhancing young DLLs' second language acquisition (Goldenberg, 2008; Gorman, 2012; August & Shanahan, 2006).

Instruction in L1

Research Question Three: Does instruction embedded in Dialogic Reading in young DLLs' home language result in a different rate of growth in L1 and L2 skills?

The GRTR-revised was used to measure children's gains on tasks of emergent literacy. Results of paired *t*-tests indicate there is no significant difference between the changes in Spanish language component skills compared to the change in similar English language skills. That is, when instruction in emergent literacy skills was embedded in DR strategies using Spanish as the language of instruction, young DLLs made equivalent gains in both languages.

The children in this study were four years old. They are still learning L1 while acquiring L2; they are considered simultaneous bilingual children (Gorman & Gillam, 2003). Genesee (in Garcia & Flore, 2010) asserts that the human neurocognitive capacity for learning two languages is equivalent to the capacity for learning one. In other words, learning L1 does not compromise a young child's capacity to learn L2; in fact, it enhances it (August & Shanahan, 2006; Genesee et al., 2006). The findings from this study are consistent with the possibility that instruction in L1 does not interfere with a young child's acquisition of L2.

Pre- and Post-tests

The *Get Ready to Read Screening Tool-revised* (GRTR; 2001) was administered pre- and post-intervention to all participants in Spanish and in English. Analysis of the results revealed that children made significant gains in their Spanish emergent literacy skills. A comparison of pre- and post- scores in English, reflect a similar, significant positive gain. The changes in Spanish language skills were compared to the changes in English language skills. There was not a significant difference in the amount of change

experienced by language. The children made equivalent gains in Spanish and English language skills as a result of DR and instruction in Spanish only.

The children experienced significant gains in PA in both languages. Pre- and post-testing of English emergent literacy skills indicated a significant increase in the group score following the intervention. PA and AK training and shared-reading all in Spanish only, resulted in significant changes in the children's scores on emergent literacy tests in English. Participants in the current study were immersed in English-only preschool classrooms during the intervention period, thus the changes might be attributable to exposure to English and maturity. This is a possible limitation of this study. Future research should use a group comparison to allow for between group comparisons of children who receive the intervention and those who do not. However, pre-testing, baseline condition, intervention, and post-testing lasted approximately six weeks; according to Gorman (2012), this was a focused, short-term intervention, therefore, the gains in English skills can be attributed to the instruction during the study.

Effect Size

Effect size is a way of quantifying the size of the difference between two groups. It indicates not just *if* an intervention worked, it indicates how well it worked (Coe, 2002). In single subject design research, effect size provides an objective judgment of the effectiveness of a treatment. Several methods are available for summarizing single subject data, and each provides similar interpretations of single subject design results (Mason, 2010). This study reports the percent of non-overlapping data (PND; Scruggs, Mastropieri, & Castro, 1987). PND is a non-regression based approach which is easy to

interpret. PND is calculated by counting the number of intervention points that do not overlap with the baseline data; dividing that by the total number of intervention points; and multiplying the result by 100. A review of the PND method after 25 years of use showed it to be "... the most versatile and meaningful" method for summarizing SSD research (Scruggs & Mastropieri, 2012; p. 17). (See Appendix I for a guide to interpreting NPD).

A PND of 70 or higher is considered effective (Bellini, Peters, Benner, & Hopf, 2007). As Table 4 shows, five participants' PND fell into the *effective* or *very effective* range. Four more fell into the *questionable effectiveness* range and six were rated as *ineffective*. However, the data indicated increases in slope or level or both in eleven participants. Mason (2010) suggested that PND and slope measure different aspects of effectiveness and that the two are not mutually exclusive. Each method of appraising the effectiveness of the study indicates a degree of effectiveness. Future research should attempt to isolate and define the aspects of the intervention that are most effective and those skills which are most effected by them. It may be interesting to note that five of the six participants whose data were rated ineffective were from the same school. The intervention was the same in all three schools. The research assistants received the same training and all met treatment fidelity standards. It may be useful to consider potential differences in context when analyzing the group results.

Validity

Internal Validity. Internal validity of the current study was established through repeated and reliable measurement, valid and reliable measuring instruments, and the

manipulation of only one variable at a time (Campbell & Stanley, 1963). The interventionists (research assistants who were university students) were trained and assessed prior to implementing the treatment. All of the research assistants exhibited mastery of the instructional techniques at the time of the training. During the intervention phase, the researcher observed the students and rated their fidelity to the training using a checklist adapted from the Adult Child Interactive Reading Inventory (ACIRI; see Appendix F). The scores on the adapted checklist ranged from 80% to 100% with an average of 91%. The researcher provided constructive feedback for those instances in which the students scored below 100%. The visual analyses of the single subject research graphs were confirmed by the pre- and post-test using the Get Ready to Read Screening Tool-revised (GRTR, 2009). When moving from the baseline condition to the intervention, all conditions, including setting, books, and interventionist remained the same. The only variable that changed was the instructional strategy. The children were exposed to English in the classroom, but the focus and short-term nature of the intervention suggests that any change in performance would be most likely due to the treatment. As mentioned earlier, future research could include a comparison group to further demonstrate the effectiveness of the treatment.

External Validity. The question of generalizability is a challenging one for single subject research. It is difficult to extend the results to a larger population when the research focus is on the individual and within subject comparison. It is important, therefore, to demonstrate external validity. Three methods of replication may be used to enhance external validity 1) Direct replication which involves using the same providers,

same procedures, and same settings with different participants who have similar characteristics; successful outcomes among different participants enhance the strength of the findings; 2) systematic replication which uses the same procedures, but in different settings and with different providers; again, successful outcomes under different conditions add to the strength of the results; and 3) clinical replication which combines interventions in a common setting with clients who have similar problems (Barlow & Hersen, 1984). In this study, external validity was enhanced by using two methods of replication: direct replication and systematic replication. Fifteen children in three schools received the current treatment in waves of five. Direct replication occurred within each wave. The first group of five was in the baseline condition for three reading sessions before receiving the specialized instruction. The second group of five, in a second school with different research assistants, stayed in the baseline condition for five sessions and then began the intervention. The third group of five, at the third school and with a third set of research assistants, was in baseline condition for nine reading sessions and received the intervention treatment for the next nine sessions. In the current study, with a multiple baselines design, direct replication involved repeating the procedures with the same interventionists in the same setting with different participants who have similar characteristics. Several children within each group of five responded positively and significantly to the intervention. Systematic replication involved repeating the process in different settings, with different interventionists (Engel, 2008). Systematic replication in this study occurred across schools and interventionists. There were children who made gains in English and Spanish skills across settings and interventionists.

Social Validity. The parents of the participants were asked to complete a brief survey at the end of the study; nine parents returned completed surveys. Horner, et al. (2005) suggested that single subject research is a useful means of defining interventions that are practical or socially valid, that is, the interventions are functionally related to outcomes that are considered socially important. The current study meets the requirements outlined by Horner, et al. (2005) for establishing social validity. The procedure is acceptable to families as indicated by their responses to the post-intervention survey (see Appendix J). Of particular interest are their reasons for having their children join the study. All who commented mentioned their desire to have their children learn and maintain their families' home language and culture. This is an important aspect of bilingual education for DLL children which should be a continuing topic of research (Cummins, 1989; Guardado, 2006; Wong, 1991). The treatment is accessible for general use. Parents or teachers who wish to provide the intervention need only Spanish language storybooks and a brief training. No other specialized resources are necessary. The treatment can be provided in settings that are natural and comfortable for families in the home and teachers in a classroom. The survey results indicated that parents noticed a difference in the children's use of the home language which supports the study findings that the intervention is effective. Parents also indicated they would allow their children to participate in similar studies in the future and that they are interested to learn more about the procedure. A growing body of research supports the need for L1 instruction for young DLLs (Goldenberg, 2008; Gorman, 2012; August & Shanahan, 2006), the value of

maintaining and strengthening the home language (Cummins, 1989; Guardado, 2006; Wong, 1991), and the importance of teaching emergent literacy skills (August & Shanahan, 2006; Chiappe, et al., 2002; Durgunoglu, 1993; Manis, et al. 2004).

Additionally, young children need strong English language skills to ensure their academic success. The current findings indicate that the intervention supports these factors which are important to the development of young DLLs.

The six classroom teachers were asked to complete a survey of their perceptions of the study at the end of the intervention (see Appendix G). Five teachers returned the surveys completed and their comments were mostly positive (see Appendix K). The teachers who responded to the survey all indicated that the intervention was enjoyable for the children and helpful in the development of their language skills. All said there were noticeable changes in the children's language skills. Four of the five teachers indicated they would be happy to have their children participate in similar studies in the future. One teacher commented that the reading sessions interfered with her classroom routine. Although she felt the intervention was helpful to the child, she expressed displeasure that the child missed circle time. She indicated she would participate in future studies only if they were scheduled for a different time of day. All of the teachers expressed a desire to learn more about the teaching strategies that were employed in the study. As mentioned earlier, this intervention is readily accessible and requires only minimal resources. Many Spanish language storybooks are available in bookstores and from on-line sources. The strategies can be use in a classroom or at home. Bilingual teachers, family members, and community volunteers can be trained to use the DR strategies and to embed emergent

literacy skills. Based on the current findings, recommendations for supporting literacy development in young DLLs at home and in school include maintaining a classroom or home library of Spanish language storybooks, and enlisting bilingual teachers, family members, and community volunteers to read with young DLLs using the embedded instructional strategies described above.

Implications of the Study

Practice. Much research currently is focused on how young DLLs learn their first and second languages. The current study adds to the body of knowledge about L1 instruction and learning among young DLLs. It can guide literacy instruction of young second language learners and may help identify potential reading challenges for DLLs. Future research may focus on specific literacy components which have the greatest impact on L1 and L2 learning when embedded in DR. Additional studies may determine the effectiveness of the instructional strategy when delivered to small groups rather than one-on-one and when it is facilitated by families or community volunteers.

There are implications for this instructional strategy in assessment and treatment of speech and language disorders among young DLLs. Gorman and Gillam (2003) assert that there is a strong correlation between PA and reading difficulty in DLLs such that low PA ability may cause reading failure. They recommend screening and support for PA skills among young DLLs. Further, research supports the use of explicit instruction and decoding activities as successful instructional strategies to improve PA abilities for children with speech and language disorders (Gorman & Gillam).

Response to intervention is a means for schools to “identify students at risk for poor learning outcomes, monitor student progress, provide evidence-based interventions and adjust the intensity and nature of those interventions depending on a student’s responsiveness, and identify students with learning disabilities or other disabilities” (NCRTI, 2010; p. 2) The National Center for Response to Intervention (NCRTI) recommends that schools and teachers employ high quality, linguistically responsive instruction and assessment. Children who are slow to progress with the activities that are provided to all children in a classroom (Tier 1), may receive more focused, individual instruction (Tier 2). Practitioners who are working with culturally and linguistically diverse (CLD) children suspected of needing instructional support may use the current intervention to assess, instruct, and monitor the children’s learning and progress as a Tier 2 intervention.

Shared-reading is an easy and effective means of engaging young children in literacy activities. The strategies can be used by practitioners and parents with minimal training and resources. Parents or other family members who are trained to use the strategies can provide support for young children’s literacy development in their home language. Families can read with children individually at home or volunteer to read with individuals or small groups in the classrooms. Calling on family members to volunteer in the classroom as Spanish language readers may also offer a unique opportunity to involve culturally and linguistically diverse families in their young children’s education and strengthen parent/professional relationships.

Teacher Preparation and Professional Development. There are implications of this study for the intercultural competency of pre-service and in-service teachers. The findings add to the extant research on the cultural and cognitive importance of maintaining a first language and the benefits of supporting bilingualism. The current findings may provide insight into how teachers can help young children learn English (L2) while supporting their home language. Darling-Hammond and Bransford (2005) suggest that knowledge and skills in instruction are not enough; teachers need to develop attitudes and expectations which incorporate students' cultures. In addition, as teachers become more culturally competent they are likely to build strong family and professional relationships. Parents of DLLs want their children to succeed in school, so they may feel pressured to use English with their children at the expense of their family's home language and culture (Huennekens & Xu, 2010). The Division for Early Childhood (DEC) of the Council for Exceptional Children (CEC) supports collaboration between families and professionals, and encourages culturally responsive professional practices (Sandall, Hemmeter, Smith, & McLean, 2005). The current intervention may allow families to maintain their home language even as they support the development of English. Guardado (2006) examined Latin American immigrant parents' perspectives on the loss and maintenance of L1 among their children. He found that "maintaining the home language meant more than just being able to access their home culture; it meant establishing and maintaining a key link to family and strengthening their relationships" (p. 68).

The DEC (2005) suggests that interventions that use families' strengths are likely to have positive outcomes for children and their families. Best-practice for family-based practice requires practices and supports that are responsive to culture and language (DEC, 2005). In the current study and in previous studies, parents have indicated that maintaining their home language and culture with their children is very important to them (Huennekens & Xu, 2010).

Policy. The current study has implications for policy regarding intercultural sensitivity and effective practices. The findings may provide additional information for administrators who are deciding on the use and extent of bilingualism and L1 in classroom instruction and assessment. Bronfenbrenner (1976) suggested that in addition to families and communities, children's development is influenced by the systems of support that serve them. Policies which support the use of best-practices and reflect intercultural sensitivity may strengthen relationships with families and support positive outcomes for children (DEC, 2005).

Limitations

There are some caveats to note in this study. The young participants have diverse cultural and linguistic backgrounds. All of the children have Spanish as their first language, but their families emigrated from different countries. The language and cultures of these countries may differ in ways that affect the children's language learning. Also, the study did not consider the parents' level of education or the quality and characteristics of the home literacy environment. The parents' dispositions to literacy and the availability of printed matter in the home may have effects on the children's

responses to the instruction. The participants attended three schools. The classroom literacy practices were not assessed for this study. Although the preschools are in the same district and use the same literacy curriculum, it is difficult to gauge the fidelity to the curriculum within individual classrooms.

One purpose for education research is to determine which instructional strategies will be beneficial for a population of learners. Single subject research focuses on the individual making it difficult if not impossible to extrapolate the results to larger populations. The overall design of this study gives it strong external validity. However, the focus on individuals limits its generalizability to an entire population of DLLs. The small number of participants is a further limitation of the study. A large N group study could yield findings that are more applicable to the general population of young DLLs. Additionally, the use of a control group which receives only the standard classroom English curriculum would allow for group comparison of children who receive the intervention and those who do not, and could further enhance the strength of the findings.

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Appendix A

PEER and CROWD Sequences for Dialogic Reading

The fundamental reading technique in dialogic reading is the PEER sequence. This is a short interaction between a child and the adult. The adult:

- Prompts the child to say something about the book,
 - Evaluates the child's response,
 - Expands the child's response by rephrasing and adding information to it, and
 - Repeats the prompt to make sure the child has learned from the expansion.
-

There are five types of prompts that are used in dialogic reading to begin PEER sequences. You can remember these prompts with the word CROWD.

Completion prompts You leave a blank at the end of a sentence and get the child to fill it in. These are typically used in books with rhyme or books with repetitive phrases. For example, you might say, "I think I'd be a glossy cat. A little plump but not too _____," letting the child fill in the blank with the word *fat*. Completion prompts provide children with information about the structure of language that is critical to later reading.

Recall prompts	These are questions about what happened in a book a child has already read. Recall prompts work for nearly everything except alphabet books. For example, you might say, "Can you tell me what happened to the little blue engine in this story?" Recall prompts help children in understanding story plot and in describing sequences of events. Recall prompts can be used not only at the end of a book, but also at the beginning of a book when a child has been read that book before.
Open-ended prompts	These prompts focus on the pictures in books. They work best for books that have rich, detailed illustrations. For example, while looking at a page in a book that the child is familiar with, you might say, "Tell me what's happening in this picture." Open-ended prompts help children increase their expressive fluency and attend to detail.
Wh- prompts	These prompts usually begin with what, where, when, why, and how questions. Like open-ended prompts, wh- prompts focus on the pictures in books. For example, you might say, "What's the name of this?" while pointing to an object in the book. Wh-questions teach children new vocabulary.
Distancing prompts	These ask children to relate the pictures or words in the book they are reading to experiences outside the book. For example, while looking at a book with a picture of animals on a farm, you might say something like, "Remember when we went to the animal park last week. Which of these animals did we see there?" Distancing prompts help children form a bridge between books and the real world, as well as helping with verbal fluency, conversational abilities, and narrative skills.

Appendix B

Books with Target Words, and Letters

TITLE	AUTHOR	TARGET WORDS	TARGET LETTERS
<i>Gathering the Sun</i>	Ada, A. F.	Rio/tio	C, D, I, M, O, S
<i>Madeline</i>	Bemelmans, L.	Ratones/ventarrones; broma/asoma; giraba/avansaba; cicatriz/actriz; acostaron/cepillaron; Volando/lloando;	M
<i>Buenas Noches, Luna</i>	Brown, M.	Juguetones, casita, viejecita	B, N, L
<i>ABC Nutritivo</i>	Canetti, Y		A, I, N, R, S
<i>ABC Salveje</i>	Canetti, Y.		A, C, I, P, R
<i>El canguro tiene mama'?</i>	Carle, E.		C, D, L, P
<i>La llama llama rojo pijama</i>	Dewdney, A.	Patalea/brincotea; llama/pajama/mama/ cama; poquito/bajito; dormido/ido	Ll, M, B
<i>Abuela</i>	Dorros, A.		A, E, M, P, V
<i>Tu mama es una Llama?</i>	Guarino, D.	Tizne/cisne; destaca/vaca	T, P, A
<i>Mira quien toca calipso!</i>	Langham, T.	Tambores/acordeones; trompetas/perfectas; mia/dia	C, O, N, D
<i>Los cinco patitos</i>	Paparone, P.	Aleteos/paseo; llamó/contó; tempranito/los patitos	C, M, D
<i>El pez arco iris</i>	Pfister, M.		L, P, A, U, N, E, V
<i>Abuelo y los tres osos</i>	Tello, J		E, M, O, P, T
<i>El loro Tico Tango</i>	Witte, A.	Tango/Mango; Amarillo/Felipillo; Modales/animals; Ladrón/tragón	T, E, Y

Appendix C

Sample Reading Guide

For Dialogic Reading follow the **PEER** sequence:

- ❖ Prompt the child to say something about the book,
 - Use **CROWD** to choose a prompt
 - Completion
 - Recall
 - Open-ended
 - Wh questions
 - Distancing

- ❖ Evaluate the child's response,
- ❖ Expand the child's response by rephrasing and adding information to it,
- ❖ Repeat the prompt to make sure the child has learned from the expansion.

You can remember these prompts with the word **CROWD**

Completion

You leave a blank at the end of a sentence and get the child to fill it in. For example, you might say, "I think I'd be a glossy cat. A little plump but not too _____," letting the child fill in the blank with the word *fat*.

Recall

These are questions about what happened in a book a child has already read. For example, you might say, "Can you tell me what happened to the little blue engine in this story?"

Open-ended

These prompts focus on the pictures in books. For example, while looking at a page in a book that the child is familiar with, you might say, "Tell me what's happening in this picture."

Wh-

These prompts usually begin with what, where, when, why, and how questions. For example, you might say, "What's the name of this?" while pointing to a picture in the book.

Distancing

These ask children to relate the pictures or words in the book they are reading to experiences outside the book. For example, while looking at a book with a picture of animals on a farm, you might say something like, "Remember when we went to the animal park last week. Which of these animals did we see there?"

Remember to –

- ❖ find a quiet place to read together;
- ❖ let the child sit close to you as you share the book;
- ❖ point to the print as you read;
- ❖ ask the child questions about letter names, letter sounds, and rhyming words;
- ❖ point out rhyming words in the books and name other words that rhyme with them;
- ❖ use and talk about new words that you see in the book;

Have fun reading!

Appendix D

Sample Scoring Sheet for Daily Assessment

Item #	Title of Book <u>Mira quien toca calipso!</u> Description of task: C, O, N, D Tambores/ acordeones; trompetas/perfectas; mia/dia	Answer
1.	cinco- (Point to the C) what is the name of this letter?	
2.	This is the letter C. What sound does the C make?	
3.	ocho - (Point to the O) what is the name of this letter?	
4.	This is the letter O. What sound does the O make?	
5.	Diez - This is the letter D. What sound does the D make?	
6.	What is another word that starts with the /d/ sound?	
7.	What word rhymes with tambores? (acordeones)	
8.	What word rhymes with trompetas? (perfectas)	
9.	Nueve - (Point to the N) what is the name of this letter?	
10.	This is the letter N. What sound does the N make?	

Appendix E

Get Ready to Read Screening Tool - revised

ANSWER SHEET



Instructions:

Read each question to the child word-for-word as it is written in the Screening Tool. The correct answer for each item is framed in the Screening Tool. On this Answer Sheet, mark the child's score for each item. Circle 1 for a correct response or 0 for an incorrect response. When the child has finished taking the Screening Tool, there should be a score (1 or 0) for each of the 25 items.

Count the number of correct responses made by the child. (Don't count the sample question.) Enter that number in the box labeled Number Correct. Refer to the reverse side of this Answer Sheet for instructions on how to find the child's Step score and Performance Level.

Item Number	Description	Score (circle)
sample	car	
1.	back of book	1 0
2.	letters (A B C)	1 0
3.	letters (B D)	1 0
4.	word	1 0
5.	name of cereal	1 0
6.	letter R	1 0
7.	letter G	1 0
8.	letter that makes /s/ sound	1 0
9.	letter that makes /t/ sound	1 0
10.	letter that makes /b/ sound	1 0
11.	letter written best	1 0
12.	name written best	1 0
13.	longest story	1 0
14.	word that starts with /b/ sound	1 0
15.	word that starts with /d/ sound	1 0
16.	rhymes with ball	1 0
17.	sea + shell	1 0
18.	pen + guin	1 0
19.	mmm + oon	1 0
20.	rhymes with arm	1 0
21.	rhymes with hat	1 0
22.	numbers	1 0
23.	two words	1 0
24.	word written best	1 0
25.	scar without /s/	1 0
Number Correct:		

Information about the child being screened

Child's Name: _____
 Child's Sex: Female Male
 Child's Age: Years _____ Months _____
 Date of Birth: _____ month _____ day _____ year

Information about the person administering the screener

Examiner's Name: _____
 Relationship to Child: Teacher
 Other: _____

Screening Date: _____ month _____ day _____ year

First Screening Second Screening Third Screening

How Should I Use the Score?

The goal of the *Get Ready to Read!—Revised* Screening Tool is to help guide your efforts to build the skills of the child being screened. The score does not predict a child's eventual reading or writing abilities. It tells where a child is on the path toward reading, so you can help the child achieve his or her greatest potential.

Adapt the experiences and activities you do with a child to his or her level of development. Start where a child is now, then increase the difficulty as the child's skills grow stronger. It is important to build skills in all areas. The Step score descriptions on the back of this page will help you identify appropriate activities.

Look at pages 11–18 in the *Get Ready to Read!—Revised* Early Literacy Manual for ideas on how to engage a child in a variety of activities that build knowledge of letters and sounds, books and print. Use and adapt these activities to your early childhood setting, community program, or home.

Remember, keep it fun and be encouraging!

Score Interpretation

(see reverse side for instructions)

Step Score	Performance Level
Step 1 <input type="checkbox"/>	Below Average <input type="checkbox"/>
Step 2 <input type="checkbox"/>	Average <input type="checkbox"/>
Step 3 <input type="checkbox"/>	Above Average <input type="checkbox"/>
Step 4 <input type="checkbox"/>	



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Product Number 1572128593

Score Interpretation

The *Get Ready to Read!—Revised* Screening Tool provides two ways to interpret the Number Correct score. One method, called the Step score, describes the child's performance in relation to the skills measured by the screener items. Each step describes the child's level of development of important pre-reading skills. The Step score can also be used to identify appropriate activities to build the child's skills. The second method, called the Performance Level, describes the child's performance in relation to the scores of other children within the same age

Step Scores		
Number Correct	Step	Step Description
0-4	1	Children who score in this range have limited understanding of print and letter-sound associations. Carefully designed activities that offer a variety of experiences with books and print are encouraged.
5-13	2	Children who score in this range have a basic understanding of books and print and can recognize some letters. Carefully designed activities that offer a variety of experiences to help the child learn more about letters and sounds, books and print are encouraged.
14-20	3	Children who score in this range have gone beyond the basic understanding of books and print and are learning to identify letter-sound associations. Carefully designed activities that offer a variety of experiences with identifying letters from print, vocalizing letter sounds, and combining sounds to make words are encouraged.
21-25	4	Children who score in this range have a solid understanding of print and letter-sound associations. Activities that reinforce the child's skills at forming words from sounds and identifying words in print are encouraged.

group. This score can help to determine if the child's pre-reading skills are below the average, average, or above the average for her or his age. A child who scores in the below average range may need extra help and attention. Please refer to the Early Literacy Manual for more explanation of the score levels and how to use them.

Identifying the Step Score

The Step score is derived from the child's Number Correct score. Identify the Number Correct score range in the left column of the Step Scores table that includes the child's score. The Step number corresponding to that score range is the child's Step score. For example, a Number Correct score of 15 corresponds to Step 3.

Identifying the Performance Level

Performance Levels are determined from the child's age and Number Correct score. The Performance Level table has four columns. The first column shows 6-month age ranges starting from age 3 years 0 months through 5 years 11 months. The next three columns show Number Correct score ranges. The column titles represent the Performance Levels.

In the column labeled Age Range, identify the range that includes the child's age in years and months. Look across that row to find the score range that includes the child's Number Correct score. The column title represents the child's Performance Level. For example, the Performance Level for a child aged 4 years and 1 month with a Number Correct score of 15 is Average.

Age Range (Years:Months)	Performance Level		
	Below Average	Average	Above Average
3:0-3:5	0-6	7-13	14-25
3:6-3:11	0-8	9-15	16-25
4:0-4:5	0-11	12-18	19-25
4:6-4:11	0-13	14-20	21-25
5:0-5:5	0-16	17-22	23-25
5:5-5:11	0-17	18-23	24-25

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HOJA DE RESPUESTAS



Instrucciones:

Lea cada pregunta palabra por palabra, diciendo exactamente lo que está escrito en la herramienta de observación. La respuesta correcta para cada ítem está enmarcada en la herramienta de observación. En esta hoja de respuestas, marque el puntaje del niño para cada ítem. Circule 1 por cada respuesta correcta ó 0 por cada respuesta incorrecta. Cuando el niño termine la herramienta de observación, deberá tener marcado un puntaje (1 ó 0) para cada uno de los 25 ítems.

Cuente el número de respuestas correctas del niño. (No cuente el ejemplo.) Registre ese número en la casilla denominada Respuestas correctas. Refiérase al reverso de esta hoja para instrucciones que explican cómo encontrar la Etapa que corresponde al puntaje del niño.

Número del ítem	Descripción	Puntaje (círcule)
Ejemplo	gato	
1.	za + pato	1 0
2.	letras (A B C)	1 0
3.	letras (B D)	1 0
4.	palabra	1 0
5.	nombre del cereal	1 0
6.	va + ca	1 0
7.	va + so	1 0
8.	letra que tiene sonido sss	1 0
9.	letra que tiene sonido mmm	1 0
10.	letra que tiene sonido je	1 0
11.	letra mejor escrita	1 0
12.	nombre mejor escrito	1 0
13.	cuento más largo	1 0
14.	palabra que empieza con <i>be</i>	1 0
15.	palabra que empieza con <i>de</i>	1 0
16.	rima con bola	1 0
17.	gira + sol	1 0
18.	lu + na	1 0
19.	sss + ol	1 0
20.	rima con gato	1 0
21.	rima con león	1 0
22.	números	1 0
23.	dos palabras	1 0
24.	palabra mejor escrita	1 0
25.	escama sin es	1 0
Respuestas correctas:		

Información sobre el niño

Nombre del niño: _____

Sexo del niño: Femenino Masculino

Edad del niño: Años _____ Meses _____

Fecha de nacimiento: _____ mes _____ día _____ año

Información sobre la persona que administra la prueba

Nombre del examinador: _____

Relación con el niño: Maestro

Otro: _____

Fecha de la prueba: _____ mes _____ día _____ año

Primera prueba Segunda prueba Tercera prueba

¿Cómo debo utilizar el puntaje?

El objetivo de la herramienta de observación *¡Prepárate a leer!—Revisada* es ayudarle a enfocar sus esfuerzos para desarrollar las destrezas del niño que está observando. El puntaje no predice cuáles serán las futuras aptitudes de lectura o de escritura de un niño. Le dice en qué punto del camino hacia la lectura se encuentra el niño, de modo que usted pueda ayudarle a desarrollar todo su potencial.

Adapte las experiencias y actividades que realice al nivel de desarrollo del niño. Comience en el punto en que el niño se encuentra y aumente el grado de dificultad a medida que progresen las destrezas del niño. Es importante desarrollar destrezas en todas las áreas. Las descripciones de las Etapas al reverso de esta página le ayudarán a identificar actividades apropiadas.

Las páginas 11–18 en el Manual de prelectura de *¡Prepárate a leer!—Revisada* le dan ideas para interesar al niño en diversas actividades que le permitirán ampliar su conocimiento de letras y sonidos, libros y demás material impreso. Use y adapte estas actividades en su programa de educación temprana, su programa comunitario o su casa.

Recuerde, ¡hágalo entretenido y alentador!

Interpretación del puntaje

(vea al reverso para instrucciones)

Etapa

Etapa 1

Etapa 2

Etapa 3

Etapa 4

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Interpretación del puntaje

El puntaje del niño indica la Etapa, o el punto en el camino hacia la lectura donde se encuentra el niño actualmente. La Etapa del niño describe el rendimiento del niño con referencia a las destrezas medidas por los ítems de la herramienta de observación. Cada Etapa describe el nivel de desarrollo del niño en cuanto a destrezas importantes de la prelectura. La Etapa también puede usarse para identificar actividades apropiadas que ayudarán a desarrollar las destrezas del niño.

Refiérase al Manual de prelectura para más información sobre la interpretación de los puntajes.

Cómo identificar la Etapa

La Etapa se deriva del número de respuestas correctas del niño. Identifique el rango en la columna de la izquierda de la tabla de Etapas que incluye el número de respuestas correctas del niño. El número en la segunda columna (titulada Etapa) es la Etapa del niño. Por ejemplo, si el niño dio 15 respuestas correctas, la Etapa que corresponde al puntaje del niño es Etapa 3.

Etapas		
Respuestas correctas	Etapa	Descripción de la Etapa
0-4	1	Los niños con puntajes en este rango tienen conocimientos limitados de la palabra escrita y de las asociaciones entre letras y sonidos. Se recomiendan actividades cuidadosamente diseñadas que ofrezcan una variedad de experiencias con libros y otros materiales impresos.
5-13	2	Los niños con puntajes en este rango tienen conocimientos básicos de libros y de la palabra escrita y reconocen algunas letras. Se recomiendan actividades cuidadosamente diseñadas que ofrezcan una variedad de experiencias que ayuden al niño a aprender más sobre letras y sonidos, libros y otros materiales impresos.
14-20	3	Los niños con puntajes en este rango saben más de lo básico sobre libros y la palabra escrita y están aprendiendo a identificar las asociaciones entre letras y sonidos. Se recomiendan actividades cuidadosamente diseñadas que ofrezcan una variedad de experiencias en la identificación de letras que aparecen en material impreso, la vocalización de los sonidos de las letras y la combinación de los sonidos para formar palabras.
21-25	4	Los niños con puntajes en este rango tienen un conocimiento sólido de la palabra escrita y de las asociaciones entre letras y sonidos. Se recomiendan actividades que refuercen las destrezas del niño para formar palabras a partir de sonidos y para identificar palabras que aparecen en material impreso.

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Appendix F

Adapted Fidelity Checklist

Adult Behavior	Observation
<i>I. Enhancing Attention to Text</i>	
1. Promotes and maintains physical proximity with the child.	
2. Sustains interest and attention through the use of child-adjusted language, positive affect, and reinforcement	
3. Gives the child an opportunity to hold the book or turn the pages.	
4. Shares the book with the child/shares a sense of audience.	
<i>II. Promoting PA and AK</i>	
1. Poses questions about letter names.	
2. Poses questions about letter sounds.	
3. Poses questions about beginning letter sounds.	
4. Poses questions about rhyming words.	
<i>III. Uses Dialogic Reading Strategies</i>	
1. Uses the PEER process of questioning.	
2. Uses CROWD questions.	

Enhancing Attention to Text _____

Promoting PA and AK _____

Using Dialogic Reading Strategies _____

TOTAL _____

3 = most of the time (4 or more times)
2= some of the time (2-3 times)
1 = infrequently (1 time)
0= no evidence

Appendix G

Teacher Social Validity Survey

Dear Teachers,

Recently, several children in your class participated in a research study of dual language learners (DLL). They shared Spanish language storybooks with college students once a day for several weeks. We would like to ask you several questions about the research experience. Please answer the questions below. You may add any additional comments in the spaces provided.

1. Did the children who participated appear to enjoy the experience? YES NO

2. Was this study helpful to the students who participated? YES NO

3. Did you notice a difference in some of the emergent literacy skills displayed in your classroom by the study participants?
YES NO

4. Was the research study disruptive of your daily routine in the classroom?
YES NO

5. Would you like for your DLL students to participate in a similar study in the future? YES NO

6. Would you like to know more about the intervention that was used in the study with dual language learners? YES NO

7. Please share additional comments or questions about the research study in the space below.

Thank you for your participation in the study and in this survey.

Mary Ellen Huennekens, M. Ed.

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Appendix H

Parent Social Validity Survey

Estimados Padres,

Recientemente, su niño ha participado en un estudio de investigación de los estudiantes en dos idiomas. Compartieron libros de cuentos en español con estudiantes universitarios una vez al día durante varias semanas. Nos gustaría saber cómo usted y sus niños se sienten acerca de la experiencia de lectura. Por favor, conteste las siguientes preguntas. Si le gustaría añadir algún comentario adicional, por favor, lo escribe al final de la encuesta.

1. ¿Su hijo habló con usted acerca de las sesiones de lectura? SÍ NO
 2. ¿Su hijo habló con usted acerca de los libros de cuentos? SÍ NO
 3. ¿Su hijo disfrutó de leer libros de cuentos en español? SÍ NO
 4. ¿Ha notado una diferencia en el uso de español de su hijo en casa? SÍ NO
- En caso afirmativo, por favor describa la diferencia.

-
-
5. ¿Por qué usted quería que su hijo participe en este estudio?
-
-

6. ¿Permitiría que su hijo participe en el estudio de investigación similar en el futuro? SÍ NO
7. ¿Le gustaría saber más sobre cómo usted puede tener eventos similares de lectura con su hijo en su casa? SÍ NO

Por favor, escriba comentarios o preguntas adicionales sobre el estudio de investigación en el espacio de abajo.

Gracias por su participación en el estudio y en la encuesta.

Mary Ellen Huennekens, M. Ed.
VCU/School of Education
huennekensme@vcu.edu

Dear Parents,

Recently, your child participated in a research study of dual language learners. They shared Spanish language storybooks with college students once a day for several weeks. We would like to know how you and your children feel about the reading experience. Please answer the questions below. If you would like to add any additional comments please write them at the end of the survey.

- | | | |
|--|-----|----|
| 1. Did your child talk to you about the reading sessions? | YES | NO |
| 2. Did your child talk to you about the storybooks? | YES | NO |
| 3. Did your child enjoy reading Spanish language storybook? | YES | NO |
| 4. Have you noticed a difference in your child's use of Spanish in the home? | YES | NO |

If YES please describe the difference _____

5. Why did you want your child to participate in this study?

6. Would you allow your child to participate in similar research study in the future?
YES NO

7. Would you like to know more about how you can have similar reading events with your child in your home? YES NO

Please share additional comments or questions about the research study in the space below.

Thank you for your participation in the study and in this survey.

Mary Ellen Huennekens, M. Ed.

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Appendix I

Guide to Interpreting Percentage of Non-overlapping Data (PND)

PND	Interpretation of effectiveness
Above 90	Very effective
Scores from 70 to 89	Effective
From 50 to 69	Low or questionable effectiveness
Below 50	Ineffective

Bellini, Peters, Benner, & Hopf, (2007).

Appendix J

Parent Social Validity Responses

Parent response →									
Question ↓	1	2	3	4	5	6	7	8	9
Did your child talk to you about the reading sessions?	Y	N	Y	Y	N	Y	Y	Y	N
Did your child talk to you about the storybooks?	Y	N	N/A	N	N	Y	Y	Y	N
Did your child enjoy reading Spanish language storybooks?	Y	N/A	Y	Y	N/A	Y	Y	Y	N/A
Have you noticed a difference in your child's use of Spanish in the home?	Y	N	Y	N	N	Y	N	Y	N
Would you allow your child to participate in similar research study in the future?	Y	Y	Y	Y	Y	Y	Y	Y	Y
Would you like to know more about how you can have similar reading events with your child in your home?	Y	Y	Y	Y	Y	N	Y	Y	Y

Survey question	Parents' comments
Why did you want your child to participate in this study?	<p data-bbox="472 327 1268 405">Because it helps her improve and learn more about her mother language</p> <p data-bbox="472 457 1365 535">Because I want her to improve her language and to able to speak with ease and improvement.</p> <p data-bbox="472 583 1365 699">I would like her to participate since I think that it's very important that my children speak perfect Spanish and not a mix of Spanish and English</p> <p data-bbox="472 751 1344 867">Because it is good for him to listen to stories not only in English but also in our language so that he won't forget it and can speak well in both languages.</p> <p data-bbox="472 919 1333 989">So that she learns more in Spanish and in English. Thank you, very much.</p>

Appendix K

Teacher Social Validity Reponses

Teacher responses → Questions ↓	1	2	3	4	5
Did the children who participated appear to enjoy the experience?	Y	Y	Y	Y	
Was this study helpful to the students who participated?	Y	Y/N	Y	Y	
Did you notice a difference in some of the emergent literacy skills displayed in your classroom by the study participants?	Y	Y	Y	Y	
Was the research study disruptive of your daily routine in the classroom?	N	Y	N	Y**	
Would you like for your DLL students to participate in a similar study in the future?	Y	N*	Y	Y	
Would you like to know more about the intervention that was used in the study with dual language learners?	Y	Y	Y	Y	

*Only if it occurs at a different time of day. **It was too early in the academic year.

Teacher Validity Survey comments

Many of the students are more vocal and more willing to participate in classroom activities

Great experience!

This was a great experience for all involved! Thank you for including us!

It would be more helpful if student doesn't miss instruction. However, I think it was useful to her in some ways. Student missed circle and/or small group time. Afternoons during area time would have been better. We selected another time that was better, but she still missed the beginning of circle time

A slight difference

The students really enjoyed the one on one attention.

My students liked one on one time.

Vita

Mary Ellen Huennekens was born April 1, 1954 in Richmond, Virginia. She graduated from Saint Gertrude High School in Richmond, in 1972. She received a Bachelor of Science in Biology (1982) and a Master of Education in Early Childhood Special Education (2009) from Virginia Commonwealth University in Richmond.

Prior to beginning graduate studies, she spent six years teaching secondary math and science in the Metropolitan Richmond area and seven years working with the Juvenile and Domestic Relations Court in Richmond as a Court Appointed Special Advocate.

Her professional background in higher education includes academic counseling for pre-med students, faculty support, research assistance, and teaching.

Mary Ellen's research interests include assessment of young children, classroom-wide assessment of pre-school classes, multicultural approaches, intercultural sensitivity among pre-service teachers, and emergent literacy for young dual language learners. Her work has been published in the *Early Childhood Education Journal* and *Research and Practice for Persons with Severe Disabilities (The Journal of TASH)*. She has presented at academic conferences such as Virginia Association for Early Childhood Education, Council for Exceptional Children, Chinese American Educational Research and Development Association, and Division for International Special Education and Services of the Council for Exceptional Children.