The Impact of Parent-led Dialogic Reading on English and Spanish Vocabulary

A Dissertation submitted
to the Graduate School
Valdosta State University

in partial fulfillment of requirements
for the degree of

DOCTOR OF SPEECH-LANGUAGE PATHOLOGY

In the Department of Communication Sciences and Disorders
& Special Education
of the Dewar College of Education and Human Services

July 2019

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M.Ed., Valdosta State University, 1991
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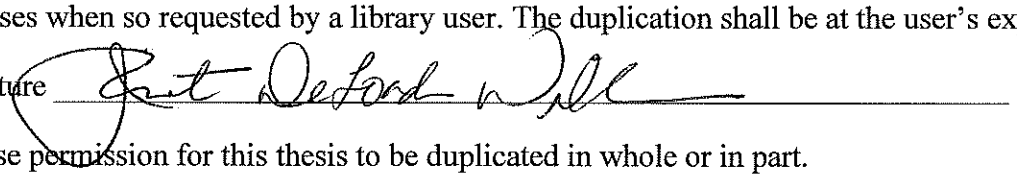
Signature 

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ABSTRACT

Vocabulary development plays an important role in pre-literacy skills. Children who are learning two languages often lag behind their peers in vocabulary skills, thus making them at risk for academic struggles. Previous research supports the use of dialogic reading interventions as a way to improve vocabulary skills. The home environment serves as a feasible place for children to learn new words through the practice of dialogic reading with their caregivers.

The purpose of this study was to investigate the effectiveness of a dialogic reading intervention, in the primary language of Spanish, on the acquisition of vocabulary skills in Spanish and English. The interventions were provided in Spanish to an intervention group of seven students, while eight other students were in the control group. The focus of the intervention was to train parents of bilingual preschoolers who were enrolled in Head Start ways to increase vocabulary development through the use of dialogic reading. Direct, in-person, training was offered to the caregivers in English and Spanish. In addition, all correspondence was given in English and Spanish, including on-line videos demonstrating dialogic reading. Caregivers were asked to implement the interventions three times a week for a total of eight weeks. While there was no statistical significance between the intervention and control groups, there were individual improvements in vocabulary skills among the participants.

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ACKNOWLEDGEMENTS

I would like to express my deepest appreciation to my dissertation committee chair, Dr. Mary Gorham, Rowan. I am so grateful for all of the guidance that you have given me throughout my four years in the SLPD program, especially during the dissertation phase. You were so very patient and were readily available to help me at all stages. Thank you to Stacy Croft, my committee member, friend, and colleague for being my support at work during this entire process. You were always there to offer advice and a kind, supportive word to encourage me to complete this journey. Thanks also to my other committee members. Dr. Matthew Carter, you offered me great guidance through my coursework, as well as throughout the dissertation process. Dr. Corine Myers-Jennings, I am grateful to you for being there for me throughout the entire four years. Your encouragement and positive attitude helped me to push myself even harder.

I am super grateful to my dear friend and the interpreter of the study, Eileen Hernandez. I truly could not have reached out to the participants and their families as successfully without your unwavering support. You transcribed letters, interpreted interviews, and made many phone calls on my behalf. I am so grateful to you.

Finally, I would like to express my deepest gratitude to my wonderful husband of 28 years, my three sons, and my daughter-in-law. Your encouragement and support throughout this process made me want to complete this journey. I am so grateful for your patience, prayers, and love. Thank you to my brother, sister, mother, and mother-in-law. You realized that this sacrifice of time would pay off in the end and you offered me endless pep talks throughout the entire journey.

DEDICATION

This dissertation is dedicated to my father, John Paul DeLoach. You always made me feel that I could accomplish anything. I learned how to fight very hard battles by the examples that you set before me. You instilled in me a great work ethic and drive to always better myself. You taught me to lean on Jesus Christ as my strength and I realize that this dissertation could not have been completed without my faith in HIM.

Chapter I

INTRODUCTION

The United States population has expanded and changed drastically over the years. In addition to the overall population increase, the number of English Language Learners (ELLs) has escalated significantly in the public schools, especially in Latino enrollment (Linn & Hemmer, 2011). In the fall of 2015, it was reported that there were approximately 4.8 million school-age children who speak a language other than English in United States public schools, with Spanish being the home language of 3.7 million of this group (National Center for Education Statistics, 2018). Many of the Latino ELLs fall into the lower socio-economic status (SES) category and enter school without appropriate skills for academic success (Whitehurst et al., 1994a). In relation to the lower SES status, these children begin school with less exposure to books and pre-academic experience than other children. ELLs are often learning at least two languages at the same time which cause them to engage both languages to comprehend auditory and visual input. This may result in taking longer to name items or to understand what is said to them. In addition, they may experience obstacles that negatively impact their academic performance, including insignificant background knowledge, minimal experience with reading activities, and limited vocabulary skills. These hindrances often lead to delays in areas of language and literacy development, e.g., phonology, semantics, syntax, and comprehension skills. Disproportionality concerns have arisen secondary to these delays.

The initiation of data collection on the identification and placement of ELL students who are placed into special education programs began over the last few decades. Historically, teachers referred minority children more frequently than non-minority children for academic and behavioral struggles (Skiba et al., 2008). The considerable increase of disproportionate referrals to special education correlates directly with the increasing number of ELLs enrolled in U.S. schools and the academic underperformance of these students (August, Shanahan, & Escamilla, 2009). Various factors have contributed to the disproportionality, including test bias, cultural differences, behavior management, and poverty (Laing & Kamhi, 2003; Skiba et al., 2008). Research involving surveys completed by preschool programs, including Head Start, validated these disproportionality concerns as analyses of the results revealed more language and literacy concerns for the ELL population than for monolingual students (Hammer, Lawrence, & Miccio, 2007). The lower academic achievement in the school setting highly correlates with the exposure and knowledge of pre-literacy skills before being school-aged (Farver, Lonigan, & Epp, 2009).

Research has proposed a strong correlation between oral language skills and literacy. Strong vocabulary skills may be a predictor of reading achievement, and those who encounter delayed vocabulary development may be at risk for long-term deficits in reading and academics, as well as emotional and social issues (Cohen, Kramer-Vida, & Frye, 2012; Ijalba, 2015; Tsybina & Eriks-Brophy, 2010). Vocabulary skills may serve as prerequisites to grammar and morphological awareness, as well as positively influence phonological awareness and letter knowledge (Van Viersen et al., 2017). However, families of ELLs are less likely to engage in pre-literacy activities, which may be used to

enhance vocabulary knowledge. When such activities occur, there are typically less instructive behaviors associated with them. In addition, many young ELLs are not enrolled in formal preschool programs, which provide a strong foundation for such skills. Therefore, to adequately prepare ELLs for academic success, the primary focus should be on language and literacy instruction, including vocabulary development (Silverman, 2007).

Literacy skills are the foundation of academic success. Learning to read incorporates the prerequisite skills of comprehension, oral vocabulary, and phonemic awareness. Young children may learn these skills through play, exploration of their surroundings, or direct interactions with their adult caregivers. Interventions at home may aid children in cultivating language and literacy skills as well as maintaining communication skills with their families in their home language (Duran, Hartzheim, Lund, Simonsmeier, & Kohlmeier, 2016). Numerous research studies reinforce the importance of the relationships between home literacy environments and children's development of language and literacy (Roberts, Jurgens, & Burchinal, 2005). An easy way to promote literacy at home is through the use of dialogic reading as it is motivating and meaningful for both the child and the caregiver (Aram, 2006).

Dialogic reading is an activity that incorporates the exchanging of dialogue between the adult and the child by utilizing questions, language expansions, and prompts to elicit more communicative engagement. This process differs from monologic interactions which involve the child's participation as a passive listener (Whitehurst & Lonigan, 1998). Dialogic reading may benefit vocabulary development, phonological

awareness, reading comprehension, and expressive language skills (Bus, van Ijzendoorn, & Pellegrini, 1995).

Prior research studies focused primarily on dialogic reading to increase language and literacy skills in children who speak English as their primary language. There are notably fewer research studies that focused on the benefits of dialogic reading with bilingual students particularly while using their home language. Previous research has supported that a foundation in the primary language is necessary for building pre-academic skills, especially in the area of pre-literacy. Therefore, it is important to examine the effects that dialogic reading interventions have on the vocabulary skills of bilingual preschoolers who participate in their home language with their parents (Roberts et al., 2005). The implementation of the interventions within the home setting will allow for a naturalistic approach for developinging a stronger foundation in their primary language (Kaderavek & Justice, 2002). Furthermore, this will afford opportunities for the bilingual preschoolers to prepare for early literacy in the second language and set a positive foundation for academic success.

Chapter II

REVIEW OF THE LITERATURE

Hispanic population in the United States

The number of Hispanic children enrolled in U.S. public schools has increased significantly over the last century and is projected to continue to increase. For the purpose of this study, the term "Hispanic" denotes an ethnic label and does not indicate a particular race (Roseberry-McKibbin, 2014). Hispanic refers to those who were born or trace their roots or family backgrounds to one of the Spanish-speaking Latin American nations or Spain. Hispanics may be defined as individuals from Cuba, Mexico, Puerto Rico, Southern America, or Central America (Smith, Stern, & Shatrova, 2008). There were 44.3 million Hispanics in the United States as of July 1, 2006 (U.S. Census Bureau, 2006). That number was equivalent to 14.8% of the total U.S. population of 299 million people. In the United States, the largest Hispanic group is from Mexico.

There are many differences among the Hispanic groups as it relates to their country of origin. While it is more common for Hispanics from Cuba and South America to have higher parent education ranks and SES, immigrants from Mexico often have higher rates of illiteracy and poverty (Garcia & Garcia, 2012). While some families come to the United States to seek better economic opportunities, others come to find educational opportunities (Peregoy & Boyle, 2005; Roseberry-McKibbin, 2014).

Immigration has been the dominating factor for Hispanic growth over the last forty years. First generation Hispanics are those who were born in a Latino country but

immigrated to the United States. Second generation Hispanics were born in the United States with at least one parent from a Latino country, and third generation individuals were born in the United States to parents who were born in the United States. Both the second and third generations are considered to be United States citizens by birth (Suro & Passel, 2003). Whether first, second, or third generation, each group brings its views and culture to academics. It is necessary for educators to be aware of these cultural differences and to develop an understanding of the interventions and communication styles that work with each student. Some second and third generation immigrants may only be exposed to English as their primary language. Others in this same classification may not learn English until they reach school-age (Garcia & Garcia, 2012).

Cultural and Socio-economic aspects of the Hispanic population

The number of Hispanic children enrolled in the public school system has tripled over the past 30 years (Smith et al., 2008). With so much diversity in the school setting, it is imperative to consider the culture of each student. Culture relates to the beliefs, values, and behaviors that are shared among a group of people, and it involves what people believe, do, and use (Peregoy & Boyle, 2005). Cycyk & Iglesias (2015) referenced that language is intricately related to culture. It is a complex process that incorporates an interaction among beliefs, values, and expectations that impact the way that children are raised and influenced (Ndung'u & Kinyua, 2009). Therefore, those providing interventions should carefully heed information regarding cultural differences in languages, values, beliefs, and practices to determine the optimal method of delivering the interventions (van Kleeck, 2006).

Since the current study involved the participation of Hispanic families, it was necessary to not only review the role of the Hispanic culture as a whole, but specifically focus on their views toward literacy and education. Typically, Hispanics revere their families. They view families as units and prioritize life at home. They often value interdependence among one another and offer support for others in their culture. The Hispanic culture has distinct gender roles. The women often work at home as caretakers of their children while the men assume the financial responsibilities and are seen as the authority figures (Roseberry-McKibbin, 2014; Smart & Smart, 1991).

The Hispanic culture teaches respect for others, especially for elders and educators. There is a great emphasis on learning behavioral skills as well as educational skills (Cycyk & Iglesias, 2015). Historically, however, Hispanic parents have had meager participation rates in the school setting. This low participation could be related to their cultural differences in views of parental roles in education. They tend to believe that teachers are the leaders of education and, out of respect, they may not initiate engagement. It may also relate to the lack of English proficiency, or their perception of not feeling a sense of welcome because of their differences (De Gaetano, 2007).

Many Hispanic families come from lower SES. Typically, lower income parents do not engage in as many instructive behaviors at home with their children as those from homes with professional parents. This pattern is found in Hispanic families, as Hispanic mothers talk and read less to their children than Caucasian mothers (Garcia & Garcia, 2012). These behaviors lead to oral language deficiencies in vocabulary, grammar use, and sentence structure that are associated with the child's home environment before entry into school (Valdez-Menchaca & Whitehurst, 1992).

These cultural practices impact the learning of language. The children are provided with emotional support, but sometimes their families focus more on providing physical and emotional needs rather than on direct participation in educational activities (Cycyk & Iglesias, 2015). While it is necessary to recognize the priorities regarding parental responsibilities in the pre-academic years, studies have shown that Hispanic parents place shared reading at a lower priority than fostering good manners and morals. Hispanic families may not begin sharing books with their children until five years of age (van Kleeck, 2006). Because pre-literacy instruction in the preschool years is predictive of future academic success, it is necessary for early childhood educators to consider these barriers and learn new skills to facilitate language and literacy education (Hammer, Miccio, & Wagstaff, 2003).

Previous research has associated racial minority status and low SES with inferior performance in linguistic, cognitive, and social development (Fannin, Barbarin, & Crais, 2018; Peña, Gillam, Bedore, & Bohman, 2011). Hispanic children with limited English proficiency often share the characteristics of having poorly educated parents and low family incomes, and they attend schools where the student body is primarily minority and low-achieving (Farver, Lonigan, & Eppe, 2009; Garcia & Garcia, 2012).

Early pre- literacy activities between Hispanic caregivers and their children are typically motivated by their beliefs regarding education, but may also be influenced by the effects of low SES. The influence of SES on a child's educational performance varies among individuals. SES may impact social, cognitive, and physical abilities as well as academic needs. Children from lower SES families show more at-risk behaviors for the development of language skills and for reading difficulties (Whitehurst & Lonigan,

1998). Lower SES may result in less reading materials at home, along with fewer shared reading experiences, both which could possible negatively impact future academic success.

Academic challenges and risk factors for Hispanic students

Historically, Hispanic students have had the lowest achievement scores of all ethnic and racial groups (Duursma et al., 2007). Their under-achievement in education may be attributed to language barriers, poverty, and relations among the school, parents, and community (Smith et al., 2008). Smith et al. (2008) performed a qualitative study that involved parental questionnaires related to language and cultural differences, parental education levels, and logistical issues that hindered parental involvement at school for Hispanic parents. The study verified that the primary barrier appeared to be a lack of communication in Spanish that prohibited Hispanic parental involvement in their children's education. The school's communication to home only occurred in English, and many of the Hispanic parents could not speak or understand English. This roadblock in communication significantly impacted essential communication between home and school and ultimately negatively influenced the academic experiences of the Hispanic students.

Although access to early education programs, such as Head Start, have been noted to have positive impacts on academic achievement and school careers of the children who attend, less than 30% of Hispanic preschoolers attend these programs or receive formal preschool education (DeBruin-Parecki, 2006; Reese, Leyva, Sparks, & Grolnick, 2010). Garcia and Garcia (2012) noted the limited access to preschool among Hispanics was secondary to capacity and an overall shortage of available preschool programs. The

limited access could also correlate with the lack of knowledge of free or affordable preschool options or the aforementioned hindrances in communication. Head Start was established in 1965 to provide comprehensive developmental programs for children and their families who were from lower SES backgrounds. This program provides education, health, nutrition, and mental health and social services to millions of families in the United States (Whitehurst, Epstein, et al., 1994b). Although Head Start is a free program and readily available to many Hispanic families, they still may not enroll because of lack of awareness, fear of acceptance, or unavailable transportation.

Many of the cultural, SES, and academic factors listed above may put Hispanic children at risk for under-education. These factors include language barriers, lack of parental involvement, level of acculturation to the new environment, and transient lifestyles (Smith et al., 2012). Hispanic parents may feel a lack of trust secondary to the language barriers that exist between home and school. The majority of U.S. public educators speak little to no Spanish, making communication about the children's academics very difficult. As previously noted, this lack of trust could lead to less parental involvement at school, as well as contribute to logistical issues. Many Hispanics rely on jobs that are temporary or transient, which may result in families frequently moving to keep a consistent income (Smart & Smart, 1991). The frequent moves can cause educational, social, and financial struggles, and place more stress on the family unit. School-age Hispanic children could easily fall behind in their coursework secondary to the transiency, which could lead to delays in language development which often impacts academic success.

Language Development

It is necessary to understand general language development to understand and relate to the educational concerns of Hispanic children. Humans convey their thoughts, feelings, perspectives, and desires with others by utilizing language. Language is an integral part of human behavior, and it is developed differently among individuals as related to physical, social, and cultural factors. It correlates to the maturation of cognitive processes among individuals (Bonvillain, 2014). Language is composed of four domains: listening, speaking, reading, and writing. It encompasses the following subcategories: phonology, morphology, syntax, semantics, and pragmatics. There is typically a uniformity of language development among children as the course of acquisition is very similar for the majority of individuals, even across different cultures (Stromswold, 2000).

Phonology is concerned with the distribution of sounds in a language and how those sounds interact with each other. It is the interpretation of speech sounds in a particular language, as well as the rules which specify how sounds interact with each other. Phonology may also involve phonemes, which are the smallest units of sound. The sounds people make while speaking possess characteristics that make them distinguishable from noises in the environment. The sounds are also specific to the language that is spoken, making it easy to identify sounds that do not belong (Mihalicek & Wilson, 2011). Children of all cultures typically speak their first sounds right after birth. They begin to produce a combination of vowel-like sounds that mimic speech, sometimes referred to as cooing. Between four and six months, children begin to babble or produce random strings of vowel-consonant combinations that resemble the language

of adults (Mihalicek & Wilson, 2011). The natural progression of speech patterns moves from simplistic to more complex and may take years to master.

As children begin to recognize and utilize speech sounds and patterns, they begin to apply morphology markers to add more meaning to their speech. Morphology relates to the smaller parts of words (morphemes) that are spoken. Morphemes add grammatical meaning to nouns, verbs, or modifiers. The morphemes may be referred to as affixes, which include suffixes and prefixes. These affixes associate the grammatical relationships between nouns and verbs. They may imply case, number, or gender to words (Mihalicek & Wilson, 2011).

Different languages utilize morphemes in different ways (Bonvillain, 2014). For example, in English and Chinese languages, there are typically very few morphemes per word, and word meanings are expressed in single, separate words. Similarly in Spanish, morpheme use varies from English. As an example, there is no past-tense marker "ed" and the " 's " is often omitted for plurals and possessives.

As toddlers master the ability to speak single words, they begin to put words together to make phrases or sentences. They typically begin combining words at approximately eighteen to twenty-four months of age (Stromswold, 2000). The way that words are organized into a sentence impacts how others understand the sentence. This organization or structure of sentences is called syntax. All languages have a specific set of rules for syntax, and often, the syntax determines how words are related to one another. In English, the case is determined by word order. In Spanish, there are many differences in word order as compared to English. For example, adjectives typically follow nouns, double negatives are used, articles are often omitted, and subjects of

sentences may be omitted if they were identified in previous sentences (Roseberry-McKibbin, 2014).

Since the objective of communication is to express meaning, the speaker and listener must encode language to participate in a conversational exchange. Semantics is the analysis of word meaning and may be expressed through various linguistic forms (Bonvillain, 2014). Semantics may be referred to as vocabulary and the use of words in specific settings. When children are exposed to a word for the first time, they rely on context and visual cues from adults to learn the meaning of the word, as recognition of the contextual use of words may imply meaning. They also depend on social responses to determine if they understand what is spoken. The acquisition of word meaning takes place through trial and error and may seem arduous at times. However, children typically produce their first words around one year old and, by age six, they may have a vocabulary approaching 14,000 words (Mihalicek & Wilson, 2011).

The way that culture views a social rule influences syntax and semantics during dialogue exchanges. The multitude of cultures in the United States represents many variations in the way that language is utilized socially and there are even discrepancies of social rules within cultures. Pragmatics is the term that represents how one utilizes language in a social realm (Bonvillain, 2014). Pragmatic language encompasses personal space or social distance, body language, politeness, and eye contact during conversational interaction (Mihalicek & Wilson, 2011). As an example, personal space differs based on familiarity or formality between persons. It would be typical for family members to show comfort being near one another; however, people may prefer more personal space around those who are less familiar.

For successful conversational exchange, it is necessary to get the attention of the one being addressed, to choose concepts that maximize the understanding of the listener, and to choose a style of speaking that keeps the listener engaged (Mihalicek & Wilson, 2011). Therefore, when interacting with children, it is necessary to engage in relevant and engaging content and dialogue. It is also important to view outside factors that may influence their development.

Secondary to biologically-based abilities or disabilities that are related to genetics, as well as differences in family functioning based on income and home environments, it is necessary to investigate environmental factors that may contribute to language and learning skills (Hoff, 2003). The aforementioned environmental factors of parental involvement, exposure to English, oral proficiency of the parents, educational level of the parents, and SES contribute largely to the development of vocabulary and literacy skills (Buac, Gross, & Kaushanskaya, 2014; Lugo-Neris, Jackson, & Goldstein, 2010). In general, children who are exposed to more interactions with their caregivers have language skills that appear more developed than those who have fewer interactions. Many times, the number of interactions directly correlates with the SES of the family. Hoff (2003) observed a group of two-year-old children while interacting with their mothers. The group was divided in accordance with SES levels of the mothers. The high SES group was noted to have more vocabulary growth than the low SES group as a result of the maternal speech and interaction that took place. Families of lower SES tend to spend less time involved in pre-academic skills and having a conversational dialogue with their children. In contrast, higher SES mothers spend more time engaging in activities that may enhance children's language as well as their vocabulary growth.

Fortunately, children are innately equipped with the ability to develop language, even when they are minimally exposed to stimuli (Stromswold, 2000).

Neuroscience of bilingualism

Secondary to the increase of recent research on bilingualism, there is an increasing focus on how it relates to cognitive neuroscience (Kroll, Bobb, & Hoshino, 2014). Bilinguals typically have distributed knowledge as they may know some concepts only in the first language and others only in the second language. For example, a child may only know the word "pollo" in Spanish, but not its translation equivalent "chicken" in English (Gross, Buac, Kaushanskaya, 2014). As previously noted managing two languages impacts cognitive-linguistic processing and may cause both advantages and disadvantages (Gibson, Peña, & Bedore, 2014).

Neuroscientists have validated that the bilingual brain typically has strengths in working memory, and there is a bilingual advantage for cognitive skills (Mohr, Juth, Kohlmeier, & Schreiber, 2018). In a study focused on understanding the relationship of bilingualism and how it impacts language, cognition, and brain development, Kroll et al. (2014) found that bilinguals engage both languages at all times and their language systems have to adapt to times when only one language must be selected. Bilinguals have to adjust their grammar, syntax, and phonology each time that they speak. Because the areas in the brain that control language intersect with areas of cognition, bilinguals appear to activate control networks in the brain more competently than monolinguals.

Marian and Shook (2012) noted that the cognitive regulatory system of the brain, which includes attention and inhibition, is impacted by bilingualism and forces the brain to rely on executive functions. The executive control system of the brain influences the

ability to inhibit responses, switch easily between tasks, and monitor working memory (Costa & Sebastian-Galles, 2014). Therefore, bilingual persons might solve conflicts more readily and switch between two tasks easier than monolinguals.

In addition to the benefits in attention and inhibition, bilinguals may experience a receptive-expressive language gap. This receptive-expressive gap occurs when receptive language abilities are significantly higher than expressive abilities and is caused by them having less practice in each language. Typically, children develop receptive vocabulary earlier than expressive vocabulary. Receptive vocabulary skills of bilingual children often fall below their monolingual peers and expressive vocabulary skills are usually even further behind. Mohr et al. (2018) related the receptive-expressive gaps to slower language processing in the area of word retrieval for bilinguals. Correspondingly, bilinguals may be subjected to interference from the secondary language which inhibits them from accessing the target language quickly and efficiently. For Spanish-English bilingual children, the gap may also relate to the different phonological patterns of the two languages (Gibson Peña, & Bedore, 2014).

Fast mapping and working memory in language acquisition

Fast mapping is a procedure that allows memory formation through the incorporation of neurological processes in the brain. Language experience, as well as discriminative abilities and listening preferences, cause the effect of mapping in the brain. Mapping refers to a process in the brain regarding how new concepts are learned. It involves the association of an auditory word form to a referent (Fong Kan, Sadagopan, Janich, & Andrade, 2014). Mapping has two phases, fast and slow. Fast mapping relates to putting a lexical label to a referent with only minimal exposure, while slow mapping

requires more exposures to increase representation (Alt, Meyers, & Figueroa, 2013). Fast mapping involves creating phonological representations of words, hypothesizing about the meanings, and creating links between these (Gray, 2006). During the fast mapping phase, the child may understand only the partial meaning of the words that they hear. After fast mapping occurs, children engage in slow mapping, where the word is supplemented by more experience and the word begins to represent the adult meaning (Gershkoff-Stowe & Hahn, 2007). As early as infancy, children begin to use their mapping skills. Kuhl (2006) related mapping to the way that infants respond to some auditory stimuli more readily than to others based on what they have heard. Infants prefer the language of their mothers as opposed to other individuals, secondary to their mothers' voices being most familiar. The infants are associating their mother's voice (the auditory sound) to the meaning of comfort (the referent). Similarly, children may use pragmatic cues to associate labels to objects or actions. When they see a smile, they associate it with activities being approved; in contrast, a frown indicates it is not approved. Fast-mapping allows the child to put meaning to a word they hear based on a single exposure or multiple exposures to that word.

Early exposure to two languages may alter the physiology of the brain as the brain changes secondary to the nature of the language it is processing (Mohr et al., 2018). This adjustment may affect the process of mapping. Neural networks in the temporal lobe of the brain activate responsively to the type of language that is heard. If two languages are being learned simultaneously at an early age, these neural networks trigger similarly. However, if the exposure to the second language happens after age four, the prefrontal brain is activated, as this area is related to executive function (Mohr et al.,

2018). Since this area of the brain controls inhibitory control, it is often activated secondary to aid bilinguals to focus on one language at a time, ignoring the competing language (Marian & Shook, 2012). Thus, the mapping may be interrupted and split into two different mappings. This could relate to why sequential bilinguals take longer to learn a second language and have more difficulty. This difference may be described as acquisition of language versus language learning because younger learners typically do not have to "sort out" the languages as systems which have their own vocabulary and rules (Mohr et al., 2018).

For children to retrieve words in either language, it is necessary to have strong working memory skills. Working memory has an essential role in the learning of language (Ardila, 2003). It is part of the cognitive system that temporarily stores and manipulates information during cognitive activities (de Abreu, Baldassi, Puglisis, & Befi-Lopes, 2013). It allows the brain to remember and carry out instructions, as well as other learning tasks that require information to be stored and easily retrieved (St. Clair-Thompson & Gathercole, 2006). It has been positively correlated to phonological awareness skills and vocabulary learning, which are pre-literacy skills. For a child to successfully read, they must be able to store phonological representations in their memory long enough for them to successfully analyze and manipulate the sounds (Gorman, 2012). In the same way, the working memory assists with vocabulary knowledge. As a child begins to know more about a word or referent, it will be easier for him to retrieve the word from memory and therefore, identity or name the object. Deficits in working memory may correlate to sparse word learning.

Neuroscientists have verified that the working memory in the bilingual brain is different from the monolingual brain. Working memory assists the bilingual speaker by suppressing access to the first language so that he/she can access the second language. It helps with cross-language interference, as bilingual persons have to engage their cognitive attention to strengthen their ability to inhibit distracting input (Mohr et al., 2018).

Word-learning involves the coordination of mapping skills and working memory. As previously discussed, vocabulary development serves as a prerequisite to the more complex language skills of grammar and morphological awareness, and it acts as a predictor of academic achievement (Van Viersen et al., 2017). Some bilingual preschoolers may experience early vocabulary learning difficulties and score below their monolingual peers on vocabulary skills but have typical cognitive and social development because of the differences in neural processing, mapping, and the differences in culture and experiences (Anaya, Peña, & Bedore, 2018; Tsybina & Eriks-Brophy, 2010). These vocabulary deficits may pose concerns for development of early reading skills, as well as later reading comprehension skills (Garcia & Garcia, 2012). Hence, identification of difficulties and initiation of intervention should begin as early as possible. Educators can thus plan their instruction with a focus on vocabulary skills and include caretakers in the process.

Development of language in bilingual speakers

Children learn their primary language through repeated exposure and by reinforcement to specific responses. They learn the second language in the same way, but the learning process requires more specific instruction than their primary language.

Words are characterized by cultural meanings and may represent the disposition and standards of a population and are generally associated with various types of encounters (Bonvillain, 2014). Learning of new words occurs gradually through incidental exposure to new words, such as hearing an unknown word in a conversation, television show, or in a storybook (Justice, Meier, & Walpole, 2005; Kapantzoglou, Restrepo, & Thompson, 2012).

Children may be classified as developmental bilinguals or as acquired bilinguals. Developmental bilinguals learn two languages at the same time or experience exposure to a minority language at home but are immersed in a majority language to experience academic success (Duran et al., 2016). This simultaneous acquisition happens when the second language is introduced before the age of three. Developmental bilinguals experience the stages of language development for both languages at the same time which may result in linguistic knowledge in the areas of vocabulary and grammar varying across the two languages. To explain further, they are exposed to two languages but may not receive as much input in each language, causing a gap in receptive and expressive language skills, as stated previously (MacLeod, Fabiano-Smith, Boegner-Page, & Fontolliet, 2012).

The other type of acquisition is sequential acquisition, commonly referred to as acquired bilingualism. This is when the second language is introduced after the first language is deep-rooted in the child, which is typically around the age of three. These acquired bilinguals may only be exposed to their primary language at home and not expected to use any other language until they reach school age. The stronger language or the first one learned, is usually considered to be the dominant language. In young

children, the one they learn first and use at home is considered dominant (Kohnert & Bates, 2002).

The bilingual process of language development may impact literacy skills as they are tied so closely to vocabulary acquisition. There is a systematic influence of one language on the other language that may occur during the acquisition of the new language (Alt et al., 2013). These cross-linguistic influences impact bilinguals' ability to learn new words in the same way as their monolingual peers, which can impact semantics and syntax, as well as the phonology of the new language. Many researchers of bilingualism have explored these dynamics and found that semantic representations are shared across languages and that these are attached to separate word-level representations in each language (Gollan, Montoya, Fennema-Notestine, & Morris, 2005).

In the case of Hispanic ELLs, they are typically exposed to both English and Spanish at the same time. Both languages may be spoken in the home and the community. These ELLs may be expected to follow directions, interact with others, and to answer questions in both English and Spanish (Hammer et al., 2003). Typically, Hispanic ELLs in this country are considered developmental bilinguals or simultaneous learners. Because Spanish is spoken at home and English is the primary language at most public facilities, children are exposed to both languages at very early ages.

Affective variables in language acquisition

Affective variables in second language acquisition may serve as barriers for ELLs. These variables include motivation, personality, and anxiety (Roseberry-McKibbin, 2014). Motivation may be described as the amount of integration that occurs between the student's culture and the American culture. Typically, the more situations

that ELLs integrate with English-speaking peers, the more motivation there is to learn English. Motivation also includes how much there is in common between the ELL and those in the English-speaking community. Typically, when there are similarities between cultures, there is more reason or motivation to interact. Personality relates to the ELL's self-esteem, degree of extroversion, and the ability to assert themselves. More extroverted ELLs typically develop conversational skills more readily than their introverted peers because they are more likely to have confidence to interact with others, giving them more practice. For introverted ELL's, anxiety often accompanies the learning of a second language and could impact their ability to learn. The differences that exist between them and their English-speaking peers may elicit anxiety that exacerbates their stress of learning a new language and their need to succeed in school (Roseberry-McKibbin, 2014). These affective variables will vary according to the individual characteristics of the ELLs. Consideration of these affective variables may help educators and caregivers plan interventions that positively impact academic and linguistic performance. For example, younger children would benefit from naturalistic approaches to intervention, in the presence of their caregivers, while in comfortable and familiar settings. This would lessen their anxiety and increase their motivation to learn while conforming to their individual personalities via working with their families.

Language and cultural differences that could impact academics

It is necessary to consider the influences of language fluency and cultural differences on the academics of ELLs. Language fluency relates to the knowledge and use of language lexically and grammatically. ELLs' amount of language fluency can be described in two different models: Conversational Informal Language Fluency (CILF) or

Formal Academic Language Fluency (FALF). The CILF takes place during basic interpersonal communication skills, and social interaction with others augments it. CILF is considered to be casual oral language, and the context may help to bring an understanding of vocabulary. In contrast, FALF may involve oral and written language and involves more formal, expository terms of language. FALF is accompanied with less physical or contextual cues and often takes longer to master (Roseberry-McKibbin, 2014).

ELLs typically master CILF before FALF as a consequence of conversing with their peers more than they interact with teachers. The use of the physical and non-verbal cues associated with CILF help to convey the meanings, making it easier to grasp. However, the academic curriculum focuses mostly on FALF. Therefore, ELLs are more likely to struggle in academics as the language is more formal and is specific to the context. Oftentimes, the FALF instruction is not accompanied by visuals, making it even more difficult for ELLs to grasp the concepts. Therefore, it is important for educators of ELLs to keep this in mind. They may add more visuals and gestures during instruction.

Another obstacle that influences ELLs' academic process is the transference of skills from one language to another. Transfer can occur in all of the areas of language: syntax, morphology, phonology, pragmatics, and semantics (Roseberry-McKibbin, 2014). In the area of syntax, the word order of sentences differs significantly between English and Spanish. While English sentences have adjectives preceding the nouns, Spanish sentences have nouns preceding adjectives. As related to Hispanics, young bilinguals may reverse the order of the nouns and adjectives while speaking the secondary language because of the influence of the first language. Verb tenses and the

formation of questions may be problematic and cause early speakers to omit auxiliaries and past tense markers. Grammatical morphemes are often omitted, which could confuse the listener (Roseberry-McKibbin, 2014).

In the area of phonology, most languages have rules regarding the kinds of sounds and sound sequences combinations. There may be sounds that occur in English that are not present in Spanish, which make literacy skills harder to learn (Mihalicek & Wilson, 2011). Spanish speakers may produce a vowel before specific consonants, such as the insertion of /e/ prior to /s/, especially in the initial position of words. Similarly, there is no /z/ phoneme in Spanish; production of an "s" or "z" in orthographic transcription is produced as /s/. There is no /j/ sound in Spanish, so speakers substitute the "y" sound. They also may substitute the /ch/ for the /sh/ sound (Roseberry-Mckibbin, 2014). These different sound patterns between English and Spanish may result in difficulty linking sounds between English and Spanish, as Englishis much more irregular than Spanish. Spanish words are typically spelled as they sound and have less phonological rules than English words. Therefore, it is common for Hispanic students to struggle in the areas of literacy secondary to these transference errors in the area of phonology.

Transference may influence pragmatic skills as social milieu differs among cultures. For example, there are notable differences in the social interaction between caregivers and children for Hispanic and Caucasian mothers. Oftentimes, Hispanic parents are more permissive towards younger children and do not push them towards academic achievement. Hispanic young females often assume more responsibilities around the home while the males may be expected to perform these responsibilities later in life (Roseberry-McKibbin, 2014). In addition, Hispanic children are taught to

participate with the family unit and focus less on individual achievement (Roseberry-McKibbin, 2014).

Since the focus of this study is on vocabulary acquisition, it is important to note that semantics differ among the cultures. Vocabulary words may not always have direct translations from one language to another which may make the learning of new words more difficult. Although ELLs may have extensive vocabularies, they may not have the depth of word knowledge which helps to alleviate transfer. ELLs typically know fewer words in their second language than their monolingual peers and know less about the meanings of the words (August, Carlo, Dressler, & Snow, 2005). Transfer as related to vocabulary knowledge relates to the process of using the similarities and differences between the two languages to aid in knowledge of new words. English and Spanish share vocabulary items that are similar orthographically and semantically. Therefore, it is common for Hispanic ELLs to use their primary language knowledge for learning vocabulary words in English (August et al., 2005).

In addition to transference issues causing difficulties in learning a second language, ELLs may experience a silent period that could mask an expressive language delay. This period involves the bilingual focusing on listening and learning the new language, and the period is often longer for those who are very young when exposure to the second language occurs (Roseberry-McKibbin, 2014). In addition to the silent period, ELLs could also go through language loss. Language loss or language attrition occurs when bilingual children are acquiring English skills as a societal language. They tend to utilize the new language more than their primary language to feel more accepted by their English-speaking peers (Uccelli & Paez, 2007). The language loss may attribute

to errors in word recall, syntax, and semantics, which may negatively impact academics, causing frustration for the bilingual students.

Academic professionals working with ELLs need to consider the impact that learning a new language has on social and academic performance. They must consider the differences in CILF and FALF to successfully provide interventions. The academic standards in public schools require a greater understanding of vocabulary. The standards focus on tasks which incorporate FALF. The professionals should refrain from making judgments on the ELLs language proficiency based purely on the CILF, as it is acquired more readily than FALF (Roseberry-McKibbin, 2014). The academic focus should incorporate the amount of transference that occurs between the two languages and how it impacts phonology, syntax, pragmatics, and semantics. These considerations, along with deciding which language to use for interventions, can allow for successful implementation of interventions.

Language of intervention

In addition to considering cultural influences while developing interventions, it is also necessary to decide which language to use: the primary language or the secondary language. There are two well-documented models of language proficiency: Separate Underlying Proficiency (SUP) and Common Underlying Proficiency (CUP). The SUP model supports the idea that skills in one language will not transfer to skills in the second language. While the SUP model has long been promoted as the best intervention for bilinguals, this model is more antiquated and there is a lack of evidence to support it (Roseberry-McKibbin, 2014). In contrast, the CUP model asserts that experience with either the primary or second language can aid in the development of both languages

(Tsybina & Eriks-Brophy, 2010; Wessels, 2014). Individuals learning vocabulary may use their conceptual knowledge of words in the first language as a platform to learn words in the secondary language. This process requires the vocabulary learner to recode words with their existing knowledge of the primary language rather than re-learning the words. The learners gain access to the secondary language by knowledge of the first language (Lugo-Neris. Jackson, & Goldstein, 2010; Mendez, Crais, Castro, & Kainz, 2015). Interventions traditionally occur in both languages or in English-only. While the approaches are very different, positive outcomes may occur with either.

While previous schools of thought would have encouraged parents to abandon their home language, research has recently proven the opposite in support of continuing the use of the primary language at home (Thordardottir, Cloutier, Menard, Pelland-Blais, & Rvachew, 2015). Incorporating a bilingual approach, supporting the CUP model, may allow parents to participate in interventions in their home language, which would improve parent-child interactions. The dilemma of the parents' proficiency in the second language would not be relevant during the interventions but would provide the social, linguistic, and cognitive support that they could offer their children (Tsybina & Eriks-Brophy, 2010).

Duursma et al. (2007) interviewed parents of fifth grade ELLs, whose primary language was Spanish, to determine the relationship between the home language and the academic literacy instruction on English and Spanish vocabulary. They analyzed parental interview results as well as standardized vocabulary assessments. The results indicated that, for children to stay proficient in English, it was not necessary for their parents to use English at home. Vocabulary scores on the *Woodcock Language Proficiency Battery*

showed that the participants exhibited age-appropriate proficiency in both English and Spanish expressive vocabulary (Woodcock, 1991). While there was proficiency in both English and Spanish, scores on the English vocabulary were higher than Spanish for the children in the sample.

Another study that supported the bilingual approach noted that gains in English vocabulary occur if shared readings occur in the home language following the initial English presentation of the vocabulary word. They found that preschoolers who participated in bilingual instruction were noted to advance in English vocabulary more readily than those who received English-only instruction (Mendez et al., 2015). Similar findings were reported for children with language impairments. Duran et al. (2016) performed a systematic review to discover if bilingual or primary language interventions were more effective for bilingual preschoolers with diagnosed language impairments. They reviewed twenty-six studies and noted that there were recent trends that supported the use of either bilingual or primary language interventions. They noted that bilingual preschoolers, who were receiving bilingual instruction, as well as home early literacy interventions in the home language, had more gains than those receiving English-only instruction. The literacy interventions included dialogic reading activities that incorporated vocabulary bridging techniques.

In a related study, Anderberg and Ruby (2013) compared the receptive vocabulary scores of bilingual preschoolers who either attended English with Spanish support classrooms, transitional bilingual education classrooms, or dual-language classrooms. The transitional bilingual education provided Spanish instruction with ELL support, and the dual-language program offered 50/50 instruction in English and Spanish. Educators

in each classroom were provided with identical interventions to utilize with the preschoolers so that they could identify differences in vocabulary/language growth as related to the program model of instruction. While the results did not differ significantly among the groups, the researchers found more positive relationships with the transitional bilingual education classrooms. The students in this setting were able to maintain their primary language skills while making strides in their knowledge of English vocabulary. However, the educators' skill sets appeared to have more impact than the setting. Thus, it seems beneficial to provide a bilingual approach to academic learning, but educator training is an essential element.

Although many educators are fluent in Spanish and English, the school system in the United States typically leans toward English-only instruction. The primary goal of education tends to promote the acquisition of English (Gutierrez-Clellen, 1999). In addition to academic instruction, Peña et al. (2011) reported that interventions and assessment of bilingual children often occur in English secondary to lack of bilingual personnel.

While diverse bilingual and monolingual ELL programs exist, many students find little assistance in the classroom. Bilingual education programs, using both the primary and secondary languages, have been noted to serve only a small percentage of eligible students. Implementing a bridging strategy of instruction could alleviate these problems. The bridging would support CUP theory by embedding primary language instruction into the secondary language lessons. A promising way to implement this instruction would be through dialogic reading in the primary language at home with caregivers while attending English-immersion educational programs (Lugo-Neris et al., 2010).

Importance of family literacy experiences

Literacy practices at home have been shown to increase pre-literacy skills, increase interest in reading, and improve later academic success (Reese et al., 2010; Rodriguez, Hines, & Montiel, 2009). Shared reading between caregivers and children may include exposure to picture and storybooks, children's television exposure, electronic media (e.g., smartphones and tablets), and language-stimulating songs and nursery rhymes. Also, family attitudes and adult modeling of reading and writing activities may shape these literacy experiences (Terrell & Watson, 2018). These literacy occasions allow parents to incorporate vocabulary training and emergent literacy skills through oral reading and answering questions regarding the print (Peregoy & Boyle, 2005). The spoken language that children hear in the home and at school helps to increase their vocabulary through mapping. The consistent exposure helps to reserve a space in their brain to aid in the retrieval of the pronunciation and meaning of the new word (Vadasy & Nelson, 2012).

Niklas, Cohrssen, and Tayler (2016) reported that the amount of time that parents spend reading to their children, as well as the number of books in the home environment, might be positive predictors of later reading abilities. Language proficiency relates to the interaction between background knowledge, vocabulary, phonology, syntax, and dialogue, as well as the ability to read and write (Ijalba, 2015). Children who have difficulties in learning language may struggle in learning literacy skills secondary to the correlation between language and literacy. Shared book reading between caregivers and their children often leads to opportunities to focus on these language and literacy skills.

Book reading among cultures

While shared book reading has many proven benefits, not all cultures view this practice as imperative. Cultures may prioritize different components of the literacy occasions. For example, African-American mothers tend to use less questioning during book reading and use fewer comments than their Caucasian peers (Rodriguez et al., 2009). They may focus more on the development of social interaction than on the growth of vocabulary. They often tell stories rather than read books to their children (Roseberry-McKibbin, 2014).

Similarly, Hispanic parents talk and read less to their children than Caucasian mothers (Garcia & Garcia, 2012; Wessels, 2014). This difference could be related to cultural expectations of the Hispanic population where children are expected to be quiet and learn through observation rather than interaction (Rodriguez et al., 2009). These cultural differences may be heightened by the tendency of Hispanic parents with less education and lower SES, just like most families of lower SES, often have less reading materials at home and fewer types of literacy materials (Hammer et al., 2003).

Wessels (2014) investigated the effects of a bilingual family literacy program for families who were learning English as a second language. Parent-child engagement in reading activities in the program, in their primary language of Spanish, increased the literacy awareness of ELL parents and helped to increase parental confidence in their abilities to participate in the education of their children. She noted that the fringe benefits of the literacy program were parental involvement at home and school. In a related study, Ijalba (2015) implemented a study that involved parent training that involved play, reading, and language stimulation activities at home. The parents implemented the

interventions in their home language of Spanish. The findings suggested that there were considerable gains in expressive vocabulary skills in both English and Spanish. Thus, communication practices in the primary language may provide the model that the home language is valued and respected (Justice, 2006). Similarly, Duursma et al. (2007) studied the implementation of family literacy practices in bilingual preschoolers. The literacy practices included homework, reading, and looking at books, as well as the caregivers telling stories to the children. The intervention results suggested that the families' language preferences at home correlated to their children's proficiency in both languages. The families that exposed their children to more English tended to transfer that knowledge to their children, and similar results happened with the families who used mostly Spanish. There were noted gains in both English and Spanish.

Research has shown that there are positive outcomes for teaching parents specific strategies to increase language skills at home. When parents respond to their children's communication, use incidental teaching methods, use proper modeling of language, and engage in communicative interaction, children show increases in their language skills (Roberts & Kaiser, 2011).

Most previous studies of Hispanic mothers' interactions during shared reading times has focused on Hispanic families with a low SES background. However, several studies have documented that low SES is associated with less literacy exposure at home, regardless of ethnicity or language (Abel, Schuele, Arndt, Lee, & Blankenship, 2017; Horton-Ikard & Weismer, 2007; Rodriguez et al., 2009). Rodriguez et al. (2009) observed a group of Mexican-American mothers, some of whom were classified middle SES and others as low SES, while reading with their preschool children. While the

reading frequency was similar between the two groups, there were significant differences in the amount of parent-child interaction during shared reading. The mothers of low SES were noted to use less positive feedback and yes/no questions than those of middle SES. While the mothers of the middle SES group used more yes/no questions and feedback that expanded utterances, there were no significant differences in the use of labeling or describing items in the books between the two groups. Because SES and cultural influences differ among demographics, it is necessary to consider these factors before developing intervention plans.

Reading styles

Because shared reading depends upon adult-child interaction, the adult's particular reading style may affect the process. Conversational patterns may vary socially and culturally, as related to cultural inclinations (Kaderavek & Justice, 2002). While some adults read with lack of expression or elaboration, others interject more descriptors and vary their tone to emphasize certain words and elaborate the storyline. More engagement occurs when the adult's reading style matches the strengths and interests of the child.

To increase preschoolers' attention to storybook readings, adults often alter their prosody, which is the use of supra-segmental features that change or alter the rhythm of speech. The prosodic features which may impact the meaning of speech are stress, pitch, and rhythm (Bonvillain, 2014). Stress is the emphasis placed on specific sounds, syllables, or words. While reading orally, putting stress on individual syllables or words can draw attention to them. If the child is beginning to lose interest, the addition of stress may alert the child to re-focus. Pitch is the degree of highness or lowness of the voice.

Changes in pitch may suggest the difference between a question and a statement, which allows children to understand the type of information expressed (Mira & Schwanenflugel, 2013). Adult readers may also change their pitch to signify different character roles in a book. For example, the reader may read in a higher pitch if they are representing a mouse character, while using a lower pitch to represent a "Big, Bad Wolf". Rhythm is a component of prosody that relates to the continuation of sound while speaking. Altering the length of a sound, thus changing the rhythm, may emphasize or exaggerate sounds or words (Bonvillain, 2014). Adults may use exaggerated speech, animal sounds, or onomatopoeia to gain children's attention and to maintain engagement. Changes in prosody may signify different characters in the book, as well as different emotions. This type of reading style is prevalent with younger children, and it has been proven to increase engagement and interaction. If the child views the interaction as work rather than natural interaction, there remains a potential that the child would lose interest quickly (Kaderavek & Justice, 2002). In contrast, if the child senses that reading is a positive and fun way to interact, they are more likely to engage.

Considering that temperament varies among children, it may be necessary to change reading styles based on the personality of the child (Mira & Schwanenflugel, 2013). While some children thrive on animated reading styles, others prefer subdued styles. Children who are naturally high-strung may prefer the animated and expressive reading styles. However, those who have a more subdued temperament may respond better to a calm reading style. Children who are more introverted could shut-down and interact less when they feel too much pressure to engage. Therefore, caregivers need to

consider the personality differences of children when planning literacy experiences (Walsh & Blewitt, 2006).

As previously noted, when adults include intentional interaction with children to incorporate new words throughout the curriculum or during everyday events, vocabulary skills improve significantly (Wasik, Bond, & Hindman, 2006). Typically, two different types of interaction occur between adults and children during reading activities: monologic and dialogic. In monologic reading, the adult takes control, and the child becomes more inanimate rather than interactive. In contrast, dialogic reading includes the use of language expansions and questioning prompts to encourage the child to engage in dialogue with the adult reader. Typical shared reading during monologic activities allows the adults to maintain most of the verbal and non-verbal control, as they hold the book, comment on the story, and turn the pages, while the child may sit passively and unengaged (Flynn, 2011; Pillinger & Wood, 2014). Teachers often interact in a monologic fashion, as they spend more time giving instructions and allow less time for children to engage in conversations simply because of logistics and classroom management issues (Wasik, 2010). In contrast, dialogic interactions are when caregivers become more flexible and allow the child to interact with them to create more interest and meaning while reading together (Kathard, Pillay, & Pillay, 2015). Dialogic reading is based on dialogic interactions and it reinforces the work of Vygotsky, who promoted engaging interactions to support learning.

Conceptual Framework of the Intervention

The conceptual framework underlying this current study is influenced by Vygotsky's theory of social interaction and triadic intervention methods. Vygotsky's

theory, often called the social learning theory, supports the idea that children develop and function best within social contexts (Vygotsky, 1978). Social interaction between adults and children serves as a practical way to apply language interventions (Schneider & Watkins, 1996). Also, Vygotsky's theory frequently serves as the foundation for studies that involve interventions which promote emergent literacy skills (Terrell & Watson, 2018). Vygotsky included the idea of the zone of proximal development (ZPD) as a construct of his theory. This concept relates to the difference in a child's ability to perform a task independently as compared to his potential ability to perform a task with an adult's guidance (Terrell & Watson, 2018). The ZPD does not remain constant but changes along with the child's development. Therefore, it is vital for adult caretakers to be aware of what level their child performs. If the material is presented below the child's ZPD, they may not be challenged enough, and if the material is too far above the ZPD, the child may show a lack of engagement. Scaffolding may be implemented to target the correct ZPD (Terrell & Watson, 2018). The engagement may help the child lengthen their sentences as the adult provides a model of a longer utterance. This practice can improve literacy skills as the expanded language correlates with improving vocabulary skills and sentence structure.

The current study is also based on the triadic intervention approach, which involves a child, their caregiver, and an early intervention provider that supports the caregiver's interaction. The outside provider's role is to offer ways for caregivers to promote developmental instruction while performing common, everyday activities (Salisbury & Cushing, 2013). The triadic intervention method is often utilized in curriculums that serve in a consultative role, such as home-based programs. It allows the

caregivers to continue to participate in familiar routines, but with the addition of specific goals that are prescribed by an outside provider, who serves as the coach. It emphasizes the role of the caregiver as the instructor and extends the idea of family-centered routines (Friedman, Woods, & Salisbury, 2012). This intervention method pairs well with dialogic reading. It allows the researcher to implement adult training to caregivers who are responsible for activating the interventions with the child. It adds to the theory of social interaction theory by adding more caregivers and aids in coaching practices (Salisbury & Cushing, 2013). However, the effective outcome of this intervention depends upon the caregivers' frequent and accurate application of the strategies (Roberts & Kaiser, 2011).

The intervention of dialogic reading

Dialogic reading is so called because it is based on the tenets of dialogue--the incorporation of curiosity, thinking, expression, and interaction with others. A dialogue is a deeper, more intimate form of interaction between people than typical conversation (Roche, 2015). Dialogue is typically implemented for a purpose as compared to conversation that is considered more informal and spontaneous. The concept of dialogic reading, introduced by Whitehurst, et al. (1988) is a shift from the typical read aloud book reading as it places more focus on engagement between the reader and the listener. Dialogic reading may be implemented at home, school, or anywhere that shared reading between an adult reader and a child occurs. The child learns to become the storyteller rather than a passive listener through the use of evocative techniques such as embedded instruction, incidental teaching, and extended instruction.

Embedded instruction incorporates engagement between the adult and child while doing things that are occurring naturally in the child's environment. Vocabulary learning or literacy training that occurs during shared reading is an example of embedded instruction. While embedded instruction may require some advanced planning to ensure that children will receive multiple opportunities to hear and use vocabulary words, it offers more learning opportunities for the children. Adult readers may call attention to new words multiple times and attach the new word to familiar words in the child's current repertoire. Embedded instruction may present occasions for learning through meta-cognitive discussions in naturalistic learning opportunities and offer multiple exposures to target vocabulary words (Coyne, McCoach, & Kapp, 2007; van Kleeck, 2006; Whitehurst et al., 1994b; Whitehurst & Lonigan, 1998).

Incidental teaching involves the creation of opportunities for the child to initiate interaction and emphasizes the idea that children learn by watching and interacting with others (Whitehurst et al., 1994a). For more formal incidental instruction to occur, adults intentionally plan on learning occasions by setting up an environment that is conducive to learning. An example of incidental teaching is setting up an enticing environment, but not initiating any activities until the child asks for it. Incidental teaching during shared book reading could incorporate appointing the child to be in charge of selecting the books or turning the pages as the book is read to them.

In addition to embedded and incidental instruction, extended instruction adds interactive opportunities in varied contexts to further vocabulary instruction during shared reading. Extended vocabulary instruction involves multiple exposures and experiences that encourage interaction to teach vocabulary concepts, i.e., the use of

props, games, or the use of more dialogue to discuss target words that occur in a story (Coyne et al., 2007; Maynard, Pullen, & Coyne, 2010; Pillinger & Wood, 2014). The extended instruction activities may include asking the student to define or to generate sentences with words from the story, have conversations about the book, link the book to relative experiences, or explain the abstract ideas that are included in the book (Coyne et al., 2007; Kaderavek & Justice, 2002; Rezzonico et al., 2015; Walsh & Blewitt, 2006; Wessels, 2014). Adults may incorporate activities or questions that are not directly found in the text or use visuals to encourage the use of predictions of events or inferences about situations (Rezzonico et al., 2015). Research has shown that the use of adult comments and questions that elicit vocabulary during dialogic reading may improve expressive vocabulary skills, whether it is embedded instruction, incidental teaching, or extended instruction. Also, the use of questions during the stories may enhance receptive vocabulary (Walsh & Blewitt, 2006).

As previously stated, Whitehurst et al. (1988) pioneered the use of dialogic reading. They incorporated the training of mothers to use specific methods of interaction while reading to their preschool children to assess the effects of parent-child reading on preschoolers' language skills. Mothers in the experimental group employed embedded, incidental, and extended instructional techniques, such as asking questions and using feedback techniques with language expansions while reading with their children. The research team in the Whitehurst et al. (1988) study noted that the intervention was successful by documenting improvements in the preschoolers' sentence length and language development in the intervention group as compared to a control group of

preschoolers who read at home with their parents without the dialogic reading interventions.

In a follow-up study, Whitehurst et al. (1994b) compared low SES children who received dialogic training at school to other low SES children who received additional dialogic reading at home with trained parents to expand previous research on dialogic reading. There was a control group that received no interventions other than typical preschool instruction. The intervention outcomes revealed significant improvements in the emergent literacy skills of writing and print concepts for both intervention groups, while the control group showed little gains in these areas. The children who received consistent interventions with their primary caregivers also improved their overall language concepts, as indicated by their post-test scores on the *Peabody Picture Vocabulary Test* (*PPVT*), the *Expressive One-Word Picture Vocabulary Test* (Gardner, 1990), the expressive subscale of the *Illinois Test of Psycholinguistic Abilities* (Kirk, McCarthy, & Kirk, 1968), and subscales from the *Developing Skills Checklist* (CTB, 1990). These results indicated that positive effects could occur through dialogic reading with trained providers who were of lower SES and not highly-educated. The study also indicated that dialogic reading could be a practical intervention for preschoolers from lower-SES backgrounds (Whitehurst et al., 1994b).

As noted in the above studies, dialogic reading intervention incorporates training adult caregivers. The caregivers may receive training in dialogic reading from speech-language pathologists, teachers, learning specialists, or other literacy-focused professionals. Training may occur in person or through the use of videos. Training involves teaching the adult readers to use dialogue that consists of repeating or rephrasing

what is read, using open-ended or Wh-questions, using completion prompts, or relating the story to the personal aspects of the child (Blom-Hoffman, O'Neil-Pirozzzi, & Cutting, 2006; Brannon & Dauksas, 2014; Opel, Ameer, & Aboud, 2009; Tsybina & Eriks-Brophy, 2010; Valdez-Menchaca & Whitehurst, 1992; Whitehurst & Lonigan, 1998). The training also incorporates systems that help adults in implementing these evocative techniques.

Definitions of PEER, CROWD approaches

Two systems are incorporated into dialogic readings, which are referred to by their acronyms: CROWD and PEER. The CROWD method includes five types of questions which may be used to elicit expanded utterances (Whitehurst et al., 1994b). These questions include 1) Completion prompts, such as fill-in-the-blank questions (this allows children to complete the sentence for the adult), 2) Recall prompts, i.e., asking children to try to remember specifics about the story (the adult asks the child to recall what has happened in the story), 3) Open-ended prompts, which encourage the children to respond in his own words (they are used in conjunction with pictures in the book), 4) Wh-prompts, which use Wh-questions to elicit more information (this help to build the understanding of words and events in the story), and 5) Distancing prompts, which relates the child to the text of the book (i.e.., encourages the child to link the book to one of their own experiences). The distancing prompts may elicit opportunities to connect to the story by incorporating analysis and reasoning opportunities.

The PEER approach is a method to allow adult readers to remember the interaction sequences: Prompt, Evaluate, Expand, and Repeat (Whitehurst et al., 1994b). Whitehurst et al. (1994b) explained that the adult should prompt the child to respond to

the questions about the book and then evaluate the child's response. The response may be correct but lack elaboration and details. The adult may need to expand the response by adding words to the child's utterance and encouraging the child to repeat the expanded utterance. If the response is incorrect, the adult may correct the response and ask the child to repeat the correct answer. The CROWD and PEER methods are intentional ways to elicit more engagement during dialogic reading and can help to elicit improvements in language and literacy skills.

Benefits of dialogic reading

The use of dialogic reading is commonplace in many preschool and school-aged classrooms and offers various opportunities for children to engage with the teacher. It offers ways to scaffold learning through language expansion and may facilitate more sophisticated conversation (Peregoy & Boyle, 2005). Dialogic reading may benefit large groups of students in a classroom, smaller groups of 3-4 children, or individual engagement with an adult-child dyad (Flynn, 2011). Repeated storybook readings create opportunities for incidental exposure to vocabulary words and help with the retention of new words (Coyne et al., 2007; Maynard et al., 2010). Various skills may be fostered while interacting through dialogic reading interventions with preschoolers, including: syntax skills, oral narrative skills, inferencing skills, emergent literacy skills, and vocabulary (Allor & McCathren, 2003; Filiatrault-Veilleux, Bouchard, Trudeau, & Desmarais, 2016; Kaderavek & Justice, 2002; Lawrence, 2014; Lever & Senechal, 2011; Pillinger & Wood, 2014; Sim & Berthelsen, 2014; Whitehurst et al., 1988; Zucker, Justice, & Piasta, 2009). Dialogic reading has proven helpful for students with learning disabilities (Tsybina & Eriks-Brophy, 2010). It may also benefit those who are at risk for

academic difficulties secondary to their SES (Flynn, 2011). Furthermore, dialogic reading has helped to develop receptive vocabulary skills in both languages for bilingual preschoolers who received the interventions in their primary language (Mendez et al., 2015).

As previously noted, having strong oral language in the areas of expressive and receptive vocabulary and pre-literacy skills may prove advantageous in the areas of reading, writing, and spelling (Correa, Baughan, Fries, Thompson, & Algozzine, 2013; Sim & Berthelsen, 2014). Dialogic reading benefits sentence structure or syntax. Relative to oral and written language, syntax relates to the organization of words into sentences, in addition to the length and complexity of the sentences. The process of oral reading with children allows them to experience grammatical forms of written language along with conversational rules that typical conversation cannot execute (Bus et al., 1995). As previously noted, children from lower SES are typically at risk for oral language difficulties as a result of experiencing fewer literary experiences. As parents spend more time reading with their children, the adult's sentence structure becomes more natural for the child to produce. The dialogic reading process allows the modeling of sentences and questions. Adults may also naturally vary their prosody as they read to help children understand longer sentences (Mira & Schwanenflugel, 2013).

Dialogic reading allows incidental exposure to syntactic structures, and as a result, children begin to imitate the adult forms of grammatical rules naturally. Also, the focus on syntactic structures allows for oral narrative skills to improve. Reese et al. (2010) compared the results of preschoolers from low SES who were exposed to one of three conditions: 1) elaborative reminiscing during reading, 2) dialogic reading, or 3) a

control condition. Mothers of the preschoolers were asked to receive training in one of the intervention methods: elaborative reminiscing - very similar to dialogic reading, but with the addition of more elaboration on linking the book to the child's past events; dialogic reading - as aforementioned; and a control group in which the families were instructed to read in their usual formats. The children whose parents received training in elaborative reminiscing techniques and dialogic reading interventions were noted to significantly improve their oral narrative skills and increased their overall sentence length as compared to the control group. While this study did not specifically state that dialogic reading was superior to elaborative reminiscing, it supported the use of extended instruction during shared reading to elicit improved syntax.

Inferential comprehension may be described as the ability to fill in the blanks or to understand a message where some elements are not known. Children's ability to infer begins to emerge during the preschool years (Filiatrault-Veilleux et al., 2016). Dialogue, or thoughtful explanations during reading, provides a way to focus on the inferences that occur in reading. This type of instruction may incorporate more questions about "why" things happened rather than "what" happened. Pappas, Varelas, Patton, Ye, and Ortiz (2012) noted that dialogic reading was shown to be successful in second-grade, bilingual science classrooms by exposing students to opportunities for comprehensible instruction in coexistence with English instruction. The researchers utilized paraphrasing and connected the read-aloud to other materials that were shared in the classroom. The classroom discussions implemented dialogic interventions which incorporated prompts and questions to elicit and highlight vocabulary through "Why" questions and by relating the information to previously learned material. While standardized assessments were not

utilized, student participation in classroom discussions increased in the area of oral narratives, as documented by analyzed transcripts of the class discussions.

Dialogic reading is also associated with improvements in emergent or pre-literacy skills. While some components of emergent literacy skills such as letter recognition and phonological awareness can be developed in isolation, the skills must be connected to print to motivate children to apply this knowledge in meaningful ways (Allor & McCathren, 2003). Phonological awareness involves the phonological make-up of oral language, including the individual phonological units or sounds that make up words. It may also include the understanding and usage of rhyming (Pullen & Justice, 2003). Whitehurst et al. (1994b) researched the impact of dialogic reading with added phonetic training on linguistic awareness and print knowledge. They involved a group of four Head Start classrooms who were assigned to either an intervention or control group. Teachers and parents were trained in the process of dialogic reading before the study. The intervention group received dialogic reading in the classroom with the teacher providing instruction, as well as additional dialogic training at home with their parents who received prior training. Pre-test and post-test comparisons for the *Peabody Picture Vocabulary Test-Revised* (*PPVT-R*), the *Expressive One-Word Picture Vocabulary Test*, the *Illinois Test of Psycholinguistic Abilities*, and developmental checklists supported that the children who received the interventions at home and school were noted to exhibit substantial increases in their knowledge regarding their concepts of print and letter recognition as a result of the dialogic reading intervention. Children in the intervention group performed at a significantly higher level than those in the control group on the

writing factor and the print concepts factor, as well as the ability to identify sounds and letters (Whitehurst et al., 1994b).

Print awareness is another pre-literacy skill. It includes the knowledge of the alphabet, the awareness of the function and form of print, and recognition of environmental print (Pullen & Justice, 2003). Zucker et al. (2009) performed research with seventeen preschool teachers to determine their specific literacy behaviors in their classrooms. They chose a group of teachers who participated in no formal training regarding print-referencing during oral reading but were familiar with dialogic reading interventions. Researchers recorded videos of the teachers as they were engaged in large group reading activities in the classroom. The preschool teachers were noted to focus on print-referencing less while reading to the large group and focused instead on the context of the story, and vocabulary instruction through question usage and completion prompts. They noted improvements in pre-literacy skills as teachers added print-referencing techniques to their dialogic reading interventions. The children participants were noted to experience an increase in reading, spelling, and comprehension as opposed to those who participated in typical classroom dialogic reading without the print-referencing. The improvements were documented through pre-tests and post-tests comparisons on standardized assessments with formal and informal assessment measures. Correspondingly, Pillinger and Wood (2014) performed a pilot study with four children to examine the impact of dialogic reading on early literacy skills. Students who received the intervention of dialogic reading had higher gains in the area of print concepts than those who participated in shared reading time without the dialogic concepts.

In another study about pre-literacy skills, Correa et al. (2013) reported gains in rhyming skills for students who received training with the *Read it Once Again* curriculum that incorporates dialogic reading. The *Read it Once Again* program emphasizes the use of rhyme, rhythm, and repetition while an adult and child read a classic children's book together. The teachers used art and movement activities that corresponded with the stories as extended instruction activities. Trained teachers used the curriculum with related activities. While there were no marked differences on receptive vocabulary skills, significant increases were noted in the areas of picture naming and rhyming skills for the group who received interventions. Analogously, Sim and Berthelsen (2014) compared dialogic reading interventions with added print-referencing as compared to dialogic reading interventions without print-referencing. While there were no significant differences in the two intervention groups, both groups of participants improved their pre-literacy skills in the areas of expressive vocabulary, rhyming skills, and knowledge of print concepts. Both intervention groups had the most gains in expressive language measures, but had notable improvements in rhyme awareness skills as compared to the control group.

As previously stated, vocabulary may be a predictor of academic achievement. Several studies have linked dialogic reading to improvements in vocabulary skills. Vocabulary acquisition may involve explicit instruction which incorporates the selection of vocabulary targets and coordinating instruction to involve these targets. It may also occur through incidental exposure to vocabulary skills while performing everyday activities such as storybook reading activities (Coyne et al., 2007). The adult readers are trained to target vocabulary and choose motivational activities that correlate with the

child's age and interest to reinforce the knowledge. The adult may introduce new vocabulary words before the reading, create ways for the child to practice the vocabulary that they learn, and relate the new words to knowledge the child already holds (Flynn, 2011). The CROWD method may be utilized to check for knowledge and understanding of the words, and the adult reader may use context to teach word meanings as an effective strategy to teach vocabulary (Spencer, Goldstein, & Kaminski, 2012). The adult may help the child create a verbal referent or meaning to incorporate mapping as an unknown word is stumbled upon in a story (Biemiller & Boote, 2006).

Dialogic reading and children with language impairments

Although the original research in dialogic reading focused on typical monolingual children, secondary research has demonstrated that dialogic reading may also benefit monolingual children who have language impairments. Valdez-Menchaca and Whitehurst (1992) found noteworthy gains in expressive vocabulary scores when dialogic reading was implemented to a group of Mexican students who exhibited moderate-to-severe language impairments. Similarly, Correa et al. (2013) found that the use of dialogic reading with the *Read it Once Again* program increased picture naming and rhyming skills for students who were labeled at-risk for language impairment.

While studies have noted success with dialogic reading for children at risk or identified with language impairments, there remain differing perspectives on the use of dialogic reading with those with impairments. McGinty, Justice, Zucker, Gosse, & Skibbe, (2012) examined the use of mothers' questions during shared reading with their children who had language impairments. The results of this study did not elicit an increase in the verbal participation of the children or vocabulary skills in general. It is

noteworthy that this study focused more on the adult's participation rather than the child's, which differs from the primary focus of the CROWD approach in dialogic reading.

The success of dialogic reading has been well-founded among monolingual preschoolers and school-age children. However, less information has been published involving this intervention with bilingual speakers. Since previous research suggests that first-language and second-language learning may overlap, educators should be equipped to bridge first language knowledge while students are learning a second language (Pappas et al., 2012; Wing-Yin Chow, McBride-Chang, & Cheung, 2010).

Dialogic reading and English language learners

August et al. (2005) reviewed methods of effective teaching that are utilized to teach vocabulary to bilingual children. They found that oral language correlated with vocabulary learning in the second language, especially in the area of receptive language. They also discovered that ELLs typically know fewer English vocabulary words and less about the definitions and meanings of words than their monolingual peers. They found that using the child's primary language knowledge as a connection to the secondary language is beneficial in learning the second language. The use of transfer, or the ability to use the similarities between the two languages, becomes instrumental in expediting the knowledge of the second language.

To research the impact of teacher talk-type on vocabulary acquisition, Aukrust (2007) examined teachers who engaged in intentional dialogue or casual conversations with preschoolers during large-group activities in the classroom. The preschoolers spoke Turkish, learning Norwegian as a second language. The Norwegian school implemented

incidental instruction that took place naturally in the large group/circle-time setting. The children who were selected for the research were videotaped during circle-time, during which they were asked to bring show-and-tell objects to share with the class or to share a favorite story. Extended instructions which incorporated discourse complexity and expanded utterances during circle time were noted to improve receptive and expressive vocabulary skills over two years. The children who received the interventions displayed increased vocabulary skills in their home language of Turkish. In addition, there was an increase in mean raw scores in both languages across the age groups that were tested. Aukrust (2007) suggested that the quality of discourse in the dialogic fashion, rather than the quantity of conversation, advanced the vocabulary skills in both Turkish and Norwegian.

Brannon and Dauksas (2014) trained parents of bilingual students on the process of dialogic reading on expressive language development. The students were considered to be "at risk" based on screenings of expressive and receptive language, motor skills, and social emotional processing. The parents of the experimental group received extensive dialogic reading training in English and Spanish. The control group was asked to participate in their traditional at-home reading methods. Direct training of the caregivers included modeling techniques. A rating inventory that involved observations of adult/child interactions was utilized as a scoring measure. Results indicated that bilingual students who participated with their trained caregivers in dialogic reading had significantly higher skills in encouraging interaction during reading sessions and the use of emergent literacy skills.

The research of Valdez-Menchaca and Whitehurst (1992) involved twenty Spanish-speaking preschoolers from Mexico. The intervention group involved a graduate student who performed dialogic reading interventions in Spanish with the preschoolers. Children's books written in Spanish were used for the intervention. The control group of preschoolers was engaged in fine-motor activities that were supplemented by everyday conversations with the preschoolers. Transcripts were taken from both groups and analyzed by bilingual coders. The results indicated higher performances on standardized vocabulary tests (in English) for those who were in the intervention group than those who were in the control group.

In another study regarding dialogic reading to benefit bilingual children, Collins (2005) utilized target vocabulary words with seventy ELL preschoolers. Their primary language was Portuguese and they were learning English. The experimental group listened to stories read by the researcher in English. The researcher included elaborate descriptions of target vocabulary words while reading commercially-available picture books to the preschoolers. While all participants exhibited vocabulary growth, those who had a better understanding of English vocabulary before the intervention were noted to show more increases in their English. However, Collins (2005) supported the use of secondary language for a detailed explanation in dialogic reading for those who are learning a new language, regardless of their prior knowledge of the second language.

Garcia and Garcia (2012) reported that using conversations during literacy activities provides support for students who exhibit limited academic vocabulary. Academic vocabulary is notoriously weaker with bilingual students, and educators should incorporate the nuances of language as well as specific vocabulary words (Garcia &

Garcia, 2012). Adults' use of questions during dialogic reading may serve as a quality component because it enables more linguistic interaction (McGinty et al., 2012). As new vocabulary words are encountered, implementing the CROWD and PEER methods could relate the new words to words already in students' repertoires. The relation of the new words to contexts that are familiar would expedite the learning of the academic vocabulary.

Tsybina & Eriks-Brophy (2010) assessed the benefits of dialogic reading with a group of bilingual preschoolers who exhibited expressive language delays. The treatment group received dialogic interventions in English via the primary researcher and in Spanish by their parents. The parents were trained in the process of dialogic reading. The interventions took place in the participants' home environments and involved the parents and the researcher. Those giving interventions read to the children in both English and Spanish for thirty, fifteen-minute sessions over six weeks. The experiment focused on the importance of the primary language (Spanish) development. The intervention included target words that were considered to be functional. The control group received delayed interventions that took place after the study. Parent reports were utilized as assessment measures, using the MacArthur-Bates Communicative Developmental Inventory in English and the Spanish version of the same inventory. The results indicated that the treatment group showed more gains in English and Spanish target vocabulary than the delayed treatment group. While the children acquired gains in both English and Spanish on the parent-completed inventories, there were no significant differences between the gains in English or Spanish. Post-intervention questionnaires

with the mothers who implemented the interventions revealed satisfaction with the process of dialogic reading and the results.

In two separate studies, dialogic reading interventions were performed with preschoolers from Hong Kong and Bangladesh who were learning English (Opel et al., 2009; Wing-Yin Chow et al., 2010). Wing-Yin Chow et al. (2010) focused their investigation on kindergarteners from Hong Kong. The kindergarteners were divided into three experimental groups: those who participated in dialogic reading in English, typical shared reading in English, or a control group. Those receiving dialogic interventions in English were noted to improve the emergent literacy skills of phonological awareness in English and Chinese. They were also noted to show gains in their Chinese receptive vocabulary skills. Opel et al. (2009) employed dialogic reading with a group of preschoolers from Bangladesh, a country that was noted to have a lack of literacy resources for younger children. The research groups were divided into a group who received the dialogic reading intervention with their teachers at school and a control group that participated in school "as usual". Those who received dialogic reading interventions presented with a 25% increase in their mean vocabulary skills as compared to a 0% increase for those who did not receive the interventions. Based on the aforementioned studies, dialogic reading has been shown to be successful with those who were ELLs. The interventions provided by teachers, parents, or other caregivers have shown documented improvements in expressive and receptive vocabulary skills, as well as pre-literacy skills.

Book selection

For successful dialogic interventions, caregivers should select books that will ultimately increase children's vocabulary, as well as their ability to predict and infer story events (Schwarz et al., 2015). To analyze the selection of books for dialogic reading, Schwarz et al. (2015) arranged storybooks based on understanding for preschoolers and generated a scale that rated the difficulty of preschool books. Twenty-two speech-language pathologists (SLPs) who used storybooks in therapy selected a list of storybooks from four different storybook-based curricula, excluding any books that were based solely on genre. They felt that books chosen for dialogic reading were either too easy or too difficult for preschoolers. The easy books did not lend to the inferential discussions, and the harder books hindered the preschoolers' abilities to decipher the intent/meaning. In contrast, Rezzonico et al. (2015) recommended that book choice for younger, preschool students relate to topics that present with a problem,conflict resolution, and a final solution to the problem.

Books with clear depictions of the characters and setting may increase the interest of younger children (Tsybina & Eriks-Brophy, 2010). To maintain the attention of preschoolers, books with fewer words on the page have proven to be the most effective (Flynn, 2011). Dialogic reading could prove more useful for young, low SES children when fewer words are on the pages secondary to their inability to understand and build upon the adults' questions (Reese et al., 2010). Books with bilingual text would promote more engagement between bilingual preschoolers and their parents secondary to the text being familiar. With Spanish text in the books, the parents could focus more on engaging in the dialogue rather than on interpreting the text.

Over the past several years, the practice of storybook reading has gone through a significant transformation secondary to accessibility to a wide array of technological reading devices. With most families in the United States owning tablet devices, the availability of children's storybook apps has also increased. The interactive books that are offered through the use of technology include a range of screen-based multimedia and extended interactive features that are impossible in print-only books (Aliagas & Margallo, 2017). These new ways of interacting with storybooks mimic the dialogic reading process in some ways, but the children are interacting with the narrator on the app rather than a caretaker. The visual displays are linked to spoken words and can aid the child in learning more vocabulary (Justice, 2006). The use of interactive features encourage children to interact with the text much like that of lift-the-flap, or pop-up books did in days past; the books become engaging, but at the same time, less contemplative (Aliagas & Margallo, 2017; Justice, 2006). It is vital to acknowledge that assistive technology cannot replace proper instruction by an adult; it should only be used to supplement and enhance instruction (Justice, 2006).

In general, caregivers should consider the population, language proficiency, and level of impairments when implementing any intervention. If a child struggles with comprehending what is said to him, he will have difficulty understanding the content of a storybook. Content should be broken down into manageable pieces. For any population involved in the dialogic reading intervention, it is necessary to consider the reason for the intervention. In addition, attention should be placed on the types of books chosen for the intervention and the caregiver who is implementing the intervention.

Length of intervention

A review of the literature on dialogic reading revealed differences in the frequency and duration of dialogic reading intervention periods. Treatment sessions ranged from two to five sessions per week and lasted from three weeks (Collins, 2005) to six weeks (Blom-Hoffman et al., 2006; Pillinger & Wood, 2014; Tsybina & Eriks-Brophy, 2010; Valdez-Menchaca & Whitehurst, 1992; Whitehurst et al., 1994a; Whitehurst & Lonigan, 1998) to an entire school year (Ijalba, 2015; Piasta, Justice, McGinty, & Kaderavek, 2012; Sim & Berthelsen, 2014; Whitehurst et al., 1994b). The length of intervention should target the population served. Factors such as parental involvement may be considered, especially with populations who tend to move frequently. Brief intervention periods tend to be successful with the transient population and younger children secondary to their vocabularies increasing rapidly between the ages of two and five years (Opel et al., 2009).

Training of caregivers (live vs. video)

The use of parent training via workshops may elicit interest in dialogic reading at home. The training should be geared to increase parent confidence and promote a positive attitude toward literacy (LaCour, McDonald, Tissington, & Thomason, 2017). Training offers positive, long-term effects as parents continue to perform dialogic reading interventions after direct training occurs (Brannon & Dauksas, 2014). Some caregiver training in dialogic reading involves explicitly the use of video-training, which either co-exists with live training or stands alone. The video-training may incorporate the proper strategies to implement during the dialogic reading process (Blom-Hoffman et al., 2006). Many of these programs are currently available commercially and are readily available to

purchase. One of the programs, *Read Together, Talk Together,* includes a fifteen-minute training, which includes the CROWD and PEER strategies, along with a rationale as to why dialogic reading is beneficial (Blom-Hoffman et al., 2006; Whitehurst, 2006). This specific program uses children's classic storybooks and reinforces rhyme, rhythm, and repetition (Correa et al., 2013).

Alternative methods of training may be necessary for those who cannot attend the live training. Videos of the training may be available on the internet via a shared video website. The parents and educators could access the videos through shared links. These links would allow the use of the video as a way to refresh their training, as well as to get examples of the implementation process. Additional coaching can be provided to the caregivers after the video training to allow for adequate follow-through and successful implementation of the process (Rezzonico et al., 2015; Wasik, 2010). Rezzonico et al. (2015) reported that the educators who received follow-up coaching from speech-language pathologists on dialogic reading procedures were noted to report more significant improvements than those who did not. Other strategies that may be utilized in the process of dialogic reading include providing one or two prompts per page of the story, re-reading the book at least three times, and asking the children to retell the story (Blom-Hoffman et al., 2006).

Improves children's enjoyment of reading

Children tend to imitate attitudes that are modeled by their caretakers. When educators and parents show enjoyment of reading, children naturally begin to feel positive about reading. Children naturally crave the adult attention that they receive in a small setting. LaCour et al. (2017) gave before-and-after-surveys to parents who were

provided training on the process of dialogic reading. They noted that parents who had completed the training were more confident and showed more interest in reading storybooks with their children. The surveys also confirmed that children became more interested in reading through this intervention. The interest in reading was likely a result of their parents' attitudes toward the intervention.

Low cost and home-based

Dialogic reading is a practical, evidence-based intervention that can be implemented in the school or home environment. The lack of book-reading at home could partially explain the poorer school achievement of communities of lower SES (Bus et al., 1995). However, parents who are low SES can provide these interventions with their children with little to no cost required (Niklas et al., 2016). There is the availability of low-cost books through retail outlets. Also, local libraries which provide books on loan are readily accessible in most locations.

Use of interpreter

To properly communicate and engage with others, it is necessary to establish ways to understand one another effectively. By valuing the native language and respecting the role of literacy in a culture, it may result in second language growth for ELL children, as well as their parents. It can also cultivate a positive attitude toward literacy (Wessels, 2014). An interpreter who is adequately trained in the interventions may enable more parent participation and reduce any confusion regarding the process. The interpreter should be aware of the reason for an intervention, the proper process of the intervention, as well as the communicative needs of the bilingual student and family

members. The interpreter should rely on the one implementing the intervention plan to develop the goals and objectives and to be there to interpret the goals to the family.

Incorporate triadic strategies to include an interpreter, parent-training, and relations with the one providing interventions

As previously discussed, race, SES, and cultural differences may ostracize Hispanic parents in their participation in their children's education (De Gaetano, 2007). The offering of differentiated opportunities for parental involvement may attract more participation and increase a family's ability to support their child's education. These opportunities may exist in direct instruction with their children or through collaborative efforts with the school.

Miedel and Reynolds (1999) examined the participation of Hispanic parental involvement in family-school relations. They found that parent participation was positively linked to kindergarten reading achievement. They also related parental involvement to less grade retention, fewer referrals/placement in special education programs, and better school attendance. Therefore, it seems logical to offer participation opportunities that are linked to the cultural and language practices of the targeted population.

Earlier intervention practices empower families to engage in their children's academics, which may result in priming the families for future collaboration with the educational system. Also, family engagement may provide more naturalistic contexts of language learning to young children (Cycyk & Iglesias, 2015). By fostering parental knowledge and educational beliefs through the early practice of school work completed at home, these patterns may instill positive behavioral habits to education and overall child

development (Hinds, 2014). The use of parent training for parent-led interventions in dialogic reading has facilitated primary and secondary language vocabulary growth (Ijalba, 2015).

Schools and communities may lack the resources to communicate with ELL families. The educators should become familiar with any obstacles that inhibit parental involvement within the school system (Smith et al., 2008). The goals and intervention techniques may include focusing on the different cultural perspectives and how the culture impacts the learning process (De Gaetano, 2007). Studies have supported that a bilingual approach to instruction may lead to an increase in vocabulary skills in both languages (Mendez et al., 2015). Also, an intervention approach that incorporates the ELL students' home language may encourage more parental participation with the intervention process (Gutierrez-Clellen, 1999). This bilingual approach could also lead to more family-focused instruction that could lessen the stress and improve family dynamics by encouraging parental involvement (Tsybina & Eriks-Brophy, 2010).

The use of parent training via workshops may elicit more interest in dialogic reading at home. The training could increase parent confidence as well as a positive attitude toward literacy (LaCour et al., 2017). The training may have long term positive effects as parents continue to utilize the procedures of dialogic reading long after the direct training takes place (Brannon & Dauksas, 2014).

Purpose of the study

Most research on dialogic reading has focused on teacher-implemented interventions in the classroom setting with monolingual students. The results have shown significant improvement in the pre-literacy skills and vocabulary skills of these students.

Studies involving dialogic reading with bilingual preschoolers and their caregivers have been implemented more recently and are less published. In the aforementioned studies by Brannon and Dauksas (2014) and Tsybina and Eriks-Brophy (2010), the participants were bilingual preschoolers. However, both studies involved bilingual participants who were either classified as "at risk" for developmental concerns or were diagnosed with speech and language disorders. Notably, the two aforementioned studies used parent checklists or researcher-based checklists as assessment measures. The study by Tsybina and Eriks-Brophy (2010) incorporated interventions in both English and Spanish. There was growth in both English and Spanish expressive vocabulary, but receptive vocabulary growth was not addressed. Brannon and Dauksas utilized parents for the interventions, but the interventions took place at school instead of home. Correspondingly, Tysbyina and Eriks-Brophy's study did not address receptive vocabulary. Since research has shown that receptive language is typically developed earlier in bilinguals and the participants were preschool-aged, this study focused on the growth of receptive vocabulary. It was essential to further this research by implementing dialogic training to Hispanic parents of bilingual preschoolers through the use of an interpreter and supplemental video training in the primary language of Spanish and to use standardized tests as assessment measures.

In summary, the present study was designed to increase the knowledge about the effects of dialogic reading on the English and Spanish vocabulary of bilingual preschoolers who attend Head Start programs. More specifically, this investigation examined the effects of parent-implemented dialogic interventions in the primary language of Spanish on the receptive vocabulary skills of bilingual preschoolers. It

involved the use of an interpreter and video-training that was available through a shared video website that was accessible at all times.

The current study was used to address the following research questions:

(1) What is the specific growth in receptive English vocabulary as measured by the *PPVT-4* as a result of Spanish-speaking preschoolers engaging in dialogic reading interventions in Spanish at home with their Spanish-speaking parent, participating in Spanish-only reading?

(2) What is the specific growth in receptive Spanish vocabulary as measured by the *TVIP* as a result of Spanish-speaking preschoolers engaging in dialogic reading in Spanish at home with their Spanish-speaking parent, participating in Spanish-only reading?

Based on these questions, the following hypotheses were developed:

(1) Spanish-speaking preschoolers who engage in dialogic reading interventions in Spanish with their Spanish-speaking parents will improve their receptive English vocabulary as measured by the *PPVT-4*.

(2) Spanish-speaking preschoolers who engage in dialogic reading interventions in Spanish with their Spanish-speaking parents will improve their receptive Spanish vocabulary as measured by the *TVIP*.

Independent/dependent variables

Parent implementation of dialogic reading would serve as the primary intervention. After receiving training in dialogic reading in Spanish and English, parents engaged in dialogue with their children during story time to increase vocabulary skills in

English and Spanish (dependent variables). The interventions were delivered in the home/primary language of Spanish (independent variable).

Chapter III

METHODOLOGY

Participants

This study was approved by the Valdosta State University Institutional Review Board on October 23, 2018, before the recruitment of participants (see Appendix A). In addition, the study was approved by the Fayette County Head Start, a.k.a. Resurgent Education and Community Health Services, Inc., as their facilities and population were utilized in the study (see Appendix B). Participants were recruited from three Head Start centers in Fayette County, Georgia based on information provided by the Disabilities Coordinator and Head Start teachers. The primary inclusion criterion was that the children and families were Spanish-English bilingual speakers or spoke Spanish as their primary language.

Head Start enrollment health forms of potential participants were reviewed to rule out any possible vision or hearing concerns. Preschool screenings had previously been performed on all students by Head Start educational staff; children with any concerns of developmental delays based on the screenings were not considered for the study. Parental permission was obtained from fifteen parents of the twenty eligible participants. Fifteen children, six girls, and nine boys, were deemed eligible to participate in the study.

In conjunction with an interpreter (the Disabilities Coordinator for Head Start), the investigator called parents of all the identified children. The procedures of the study were verbally explained in either English or Spanish, whichever was deemed most

appropriate, to increase understanding and to alleviate any possible misunderstandings (see Appendix C). Following the phone conversations (see Appendix D), informed consent letters and parental surveys were sent to the parents as well as written transcripts of the phone conversations. All documents were provided in English and Spanish. There were notes attached to the consent forms to mark places for mandatory signatures, as well as to further explain the procedures. The interpreter was available to perform follow-up phone calls to answer questions about the study.

The chosen participants were between 39 and 62 months of age at the beginning of the study. The median age of the intervention group was 48 months (age range: 39 months-62 months), while the median age of the control group was 52 months (age range: 40 months-61 months). The participants were primarily second-generation immigrants. Eleven of the participants' parents were from Mexico, two were from Honduras, one was from Peru, and one was from Venezuela. The participants' parents have lived in the United States from a range of 2 years to 20 years. Seven of the participants were from homes where at least one parent spoke proficient English.

The participants were divided into four age groups. There were two students ages 36-41 months (one girl, one boy) and four students ages 42-47 months (four boys). In addition, there were five students ages 48-53 months (three girls, two boys), and four students ages 54-62 months (three girls, one boy). Participants from each age group were randomly assigned to the intervention group or the control group. This process resulted in seven participants being assigned to the intervention group: one girl aged 36-41 months, two boys aged 42-47 months, one boy and one girl aged 48-53 months, and one boy and one girl aged 54-62 months. The control group consisted of eight participants:

one boy aged 36-41 months, two boys aged 42-47 months, one boy and two girls aged 48-53 months, and one boy and one girl aged 48-53 months.

The investigator, an ASHA-certified speech-language pathologist, working on her clinical doctorate in speech-language pathology, researched and organized the training materials and set up the training times and locations. She was also the primary communicator to the participants and their families. The Disabilities Coordinator served as the liaison between the researcher and the participants, as well as the primary interpreter of the study. She was born in Puerto Rico. Spanish was her primary language as a child, but she began speaking English in kindergarten as part of her academic curriculum. She has lived in the United States since 1990 and has a B.S. in Special Education. She has worked at Head Start for seven years and has been an educator for 33 years, with most of her experience within the preschool setting.

Materials

A researcher-developed survey similar to ones developed by Brannon & Dauksas (2014) and Peregoy & Boyle (2005), was administered to parents of the participants to establish if any family characteristics could impact the study (see Appendix E). Items on the survey included information regarding the parent's education history and native language, primary language spoken in the home of the participant, amount of time that English was spoken in the home, number of books in the home, and the amount of time that parents spent reading or performing other literacy behaviors with the children.

The *Peabody Picture Vocabulary Test-4 (PPVT-4)* (Dunn & Dunn, 2007) and the *Test de Vocabulario en Imagenes Peabody (TVIP)* (Dunn, Padilla, Lugo, & Dunn, 1986) served as pre-tests and post-tests for all participants. Both of these assessments have

previously been used in similar studies (Cohen et al., 2012; Hammer et al., 2003). The *TVIP* contains 125 translated items to assess the vocabulary of Spanish-speaking bilingual students and is based on the *PPVT*.

Internal reliability of this study was established through the consistent use of reliable measurements and instruments. The *PPVT-4* was reported to have very high test-retest reliability, with correlations between .92 and .96. A split-half reliability for each test form, A and B, yielded .94 and .95 on each form, proving internal consistency. In addition, alternate-form reliability reports for the A and B forms proved them to be very reliable with reliability coefficients between .87 and .93. In addition, the construct and convergent validity were reported to valid as compared to other standardized vocabulary tests (Dunn & Dunn, 2007). Also, the *TVIP* was produced based on the *PPVT-4*. The *TVIP* norms were from Mexico and Puerto Rico and the reliability was reported to be 91-94% (Dunn et al., 1986). Both assessments were also considered valid as there were good test-retest reliability and internal consistency reports stating that the tests measured what they were supposed to measure.

Materials for the dialogic reading intervention included commercially-available children's books that were considered age-appropriate for the preschool population. The books were paired with the preschool curriculum and related to pivotal early childhood themes involving animals, family, and pre-academic concepts. These books had very limited text and were written in English and Spanish (all i. e., Beaton, 1994). Each page consisted of a concept that was depicted by a colorful picture and an English and Spanish word for the concept. The titles included: *Animals*, *Food*, and *Toys* along with five other titles related to preschool vocabulary (see Appendix F).

Each participant in the intervention group was given a string backpack. In the backpack was a binder that had a weekly reading log (see Appendix G), descriptions of the CROWD and PEER methods (see Appendix H) the book of the week, and scripts of the book in English and Spanish (see Appendix I). All participants were given identical books each week.

Procedures

The design of the study used a pretest-posttest group design. As previously noted, the participants were divided into two groups. Seven of the participants were assigned to the intervention group. For this group, the parents were asked to read with their children at home in Spanish, using dialogic reading interventions. The other eight participants were assigned to a control group in which parents were instructed to read with their children in their usual pattern.

Before implementing the interventions, the investigator trained the interpreter on the fidelity of implementation of dialogic reading. This instruction included the interpreter watching examples of the investigator performing dialogic reading on videos as well as reading several research articles about the practice. She was also given in-person training procedures of dialogic reading, during which the investigator demonstrated the procedure with a student of Head Start. The interpreter was also trained on the administration of the *PPVT-4* and the *TVIP* to incorporate fidelity in the testing procedures.

In similar fashion to training the interpreter, the caregivers were trained on the process of dialogic reading and were assessed before implementing the interventions. The live training was video-taped so that all participants received identical training. The

study was noted to hold external validity as it was easily replicated to all participants via the use of scripts and video training. Direct replication of the study encompassed three different locations with seven students in the intervention group.

All participants were administered the *PPVT-4* and *TVIP* to examine the effects of dialogic reading on receptive vocabulary. All of the assessments were performed in quiet resource rooms at Head Start except one home-based student who was in the control group; he was tested at his home. The investigator administered to all participants the *PPVT-4*, Form A, using the procedures outlined in the test manual, for the pre-intervention assessment while the interpreter observed. For the *TVIP*, the administration instructions were followed with the exception that the interpreter read the questions in Spanish as the researcher scored the items. At the end of the eight-week-intervention period, all participants were administered the *PPVT-4* and *TVIP* again. The post-test procedures were identical to the pre-test procedures except the *PPVT-4* form B test being used rather than the form A test. Standard scores for each assessment were determined based on each participant's raw scores.

Based on group assignments, parents of participants in the intervention group were offered a "live" training session. The investigator provided training on the process of dialogic reading for adult readers. The interpreter was present and interpreted the entire training. During the training session, the investigator explained that dialogic reading is a method of enriching the reading process using conversational tactics during shared reading time. She read a bilingual, preschool-level book and provided examples and methods of dialogic reading using the CROWD and PEER methods. This process was completed in English; however, the interpreter repeated the same procedures in

Spanish. A video-recording was made during the training so the procedures could be posted on a video-sharing website to enable access for those who did not attend the live session.

The CROWD and PEER methods have been discussed previous ly. To review, the CROWD method allowed adult readers to utilize five types of questions to expand the language of their children by incorporating questioning and oral vocabulary. These five types of questions included: 1) Completion prompts, 2) Recall prompts, 3) Open-ended prompts 4) Wh-prompts and 5) Distancing prompts. The PEER approach was used to aid the adult readers in remembering ways to prompt the participants as they read together: Prompts, Evaluate, Expand, and Repeat. As noted previously, written instructions on the CROWD and PEER methods were given in English and Spanish to supplement the oral instruction as well as to serve as reminders during the interventions.

Three parents of the participants in the intervention group attended the live training. All other parents of the intervention group were emailed a link of the training via a shared video website. The interpreter and the researcher subsequently contacted these parents to ensure that all material on the videos was understood. The researcher sent a weekly email written in English and Spanish to the intervention group to serve as reminders of the procedures for each week. The control group received emailed messages at the beginning of the study that explained the division of participants and the process of the study. They also received messages each week throughout the study, reminding them to continue to participate in their usual shared reading time with their children.

To ensure fidelity of the interventions, the parents who attended the live training were asked to demonstrate their knowledge of the procedures at the end of the session. They were given reminders as needed, but adhered to the basic principles of the intervention. The investigator visited with each parent that could not be at the live training at the Head Start locations to ensure that they understood the procedures for dialogic reading. All participants in the intervention group were videoed at least once during the study. These videos were watched and analyzed by the experimenter and the interpreter using a checklist (see Appendix J).

The participants in the control group were offered the parent training after the study as to not skew the experimental results. During weeks following the intervention period, the control group parents were sent the link to the original training and books were sent home in the same method as the intervention group to allow for all of the participants to benefit from dialogic reading interventions.

Videos of the investigator performing dialogic reading were posted on the shared video website during the first three intervention weeks to serve as examples. The parents were reminded to view these posted training if they needed examples or reminders of the techniques. Written examples (in English and Spanish) of dialogue also accompanied the books that were sent to the intervention group each week (see Appendix I). These dialogue sheets served as scripts for the parents, broken down by each page of the book. These examples proposed ways for parents to interact on each page. However, the parents were encouraged to discuss topics that were relevant to their families as they were reading.

The investigator asked that each book be read in Spanish to the students three times per week for eight weeks in their home environments. The parents documented reading times on a reading log each time that they read a book. These logs were viewed weekly to ensure that the interventions were being conducted at least three times weekly.

The books were exchanged weekly for a total of eight different books. During the intervention period, the control group continued to participate in the age-appropriate school literacy activities that were part of the curriculum, along with continuing with their home reading routines that were occurring before the study.

To gather anecdotal information, a sample of two of the participants was observed to gauge the child's interest in the activity, as well as their responses to the interventions. One mother expressed concerns that her child was "bored" with the books secondary to the limited text. She was given more ways to elaborate with the books and reminded to use the scripts to encourage engagement. She responded that these suggestions were beneficial.

A parental survey, similar to the one used in the Maynard et al. (2010) study was conducted at the end of the study regarding the intervention procedures and methods used in the study (see Appendix K). The survey was a Likert scale, and parents were asked to answer each question on a scale from 1-5, with one meaning strongly agree and five meaning strongly disagree.

Data analyses were designed to detect group differences in chronological age, maternal education level, and pre-test/post-test differences between the intervention and control groups. To assess the differences in chronological age and maternal education levels, the use of spreadsheet data, along with visual inspection of the differences, were

implemented. The median was used as the primary data reference. Nonparametric pairwise comparisons were conducted using the Wilcoxon Signed Ranks test for the comparisons of group differences. Individual improvements on the pre-test and post-test scores were evaluated based on perecentage change.

Chapter IV

RESULTS

Introduction

The purpose of this study was to provide direction in determining if parent-led dialogic reading in the primary language of Spanish could promote vocabulary development in both the primary language of Spanish and the second language of English. There were seven participants in the intervention group and eight participants in the control group. Parental surveys and pre-test data from the *PPVT-4* and *TVIP* were collected one week before interventions. Post-test data with the standardized assessments were collected after the eighth week of interventions. All assessments were performed in a resource setting with the researcher, an interpreter, and the student.

Results of Parental Surveys

At the beginning of the study, prior to any interventions, all participating parents completed questionnaires that included items concerning the age of participants, maternal education, length of child's time in preschool, length of time that family lived in the United States, country of origin, and amount of time that parents spent on literacy activities with the participants (see Appendix E).

Using spreadsheet data analysis and visual inspection, the parental surveys were examined. As seen in Tables 1 and 2, the parental survey results revealed no difference between the intervention and control groups in chronological age, as the median chronological age of the participants in the intervention group was 52 months and 48

months for the control group. Maternal education level for the intervention group was higher, with a median of 10 years and a range from six to twelve years. The control group median was six years and ranged from five to ten years.

Table 1

Survey Data for the Intervention Group

Participant	Age (in months)	Maternal education (in years)	Frequency of book reading weekly	Number of books
K	48	10	2	5
J	50	8	1	15
B	59	6	7	15
L	45	10	1	32
I	39	12	7	40
E	42	10	5	40
C	62	12	1	25

Table 2

Survey Data for the Control Group

Participant	Age (in months)	Maternal education (in years)	Frequency of book reading weekly	Number of books
AM	40	6	3	15
N	52	10	1	40
NJ	55	10	1	50
G	47	5	1	5
A	47	10	3	15
P	52	6	2	4
X	61	6	7	100
C	52	6	6	5

Similarly to the investigation of the maternal education level, visual inspection of data collection and spreadsheet data analysis were utilized for the home literacy environment and frequency of book reading breakdown. Analyses of the questions regarding the home literacy environment revealed that the median frequency of shared

book-reading between caregiver-child during a typical week was similar between the two groups, with two times for the intervention group and 2.5 times for the control group before interventions. The frequency of book reading among participants of both intervention and control groups ranged from one to seven times per week. The median number of reported books at home for the intervention group was 25, and the control group was 15. The range of each group was quite large; however, as can be seen in Table 1, it appears that the number of books per participant tended to be greater in the intervention group. Only one participant in the intervention group reported having five books while others in that group had between 15-40. However, three participants in the control group reported having 4-5 books, with one participant having 100.

Receptive Vocabulary Test Scores

To assess the hypothesis that children in the intervention group would make greater gains than those in the control group, nonparametric pairwise comparisons were conducted using the Wilcoxon Signed Ranks test. Parent implementation of dialogic reading (independent variable) served as the primary intervention. Baseline measures were calculated using the pre-test standard scores of the *PPVT-4* and the *TVIP*. Post-test measures were obtained through the use of the same vocabulary measures but were given after eight weeks of interventions. In Table 3, the pre-test and post-test results for the intervention and control groups are listed. See Figures 1-4 for pre-test and post-test standardized scores of all participants.

Table 3

Pre-test and Post-test Scores

Intervention group	*PPVT* pre	*PPVT* post	*TVIP* pre	*TVIP* post
K	61	69	78	101
J	77	75	96	96
B	96	103	86	86
L	79	82	80	80
I	77	76	88	86
E	129	119	91	94
C	76	69	70	81

Control group	*PPVT* pre	*PPVT* post	*TVIP* pre	*TVIP* post
AM	58	65	93	87
N	60	65	78	84
NJ	101	73	71	67
G	63	61	74	78
A	53	59	72	75
P	66	73	80	74
X	88	100	55	55
C	88	103	102	96

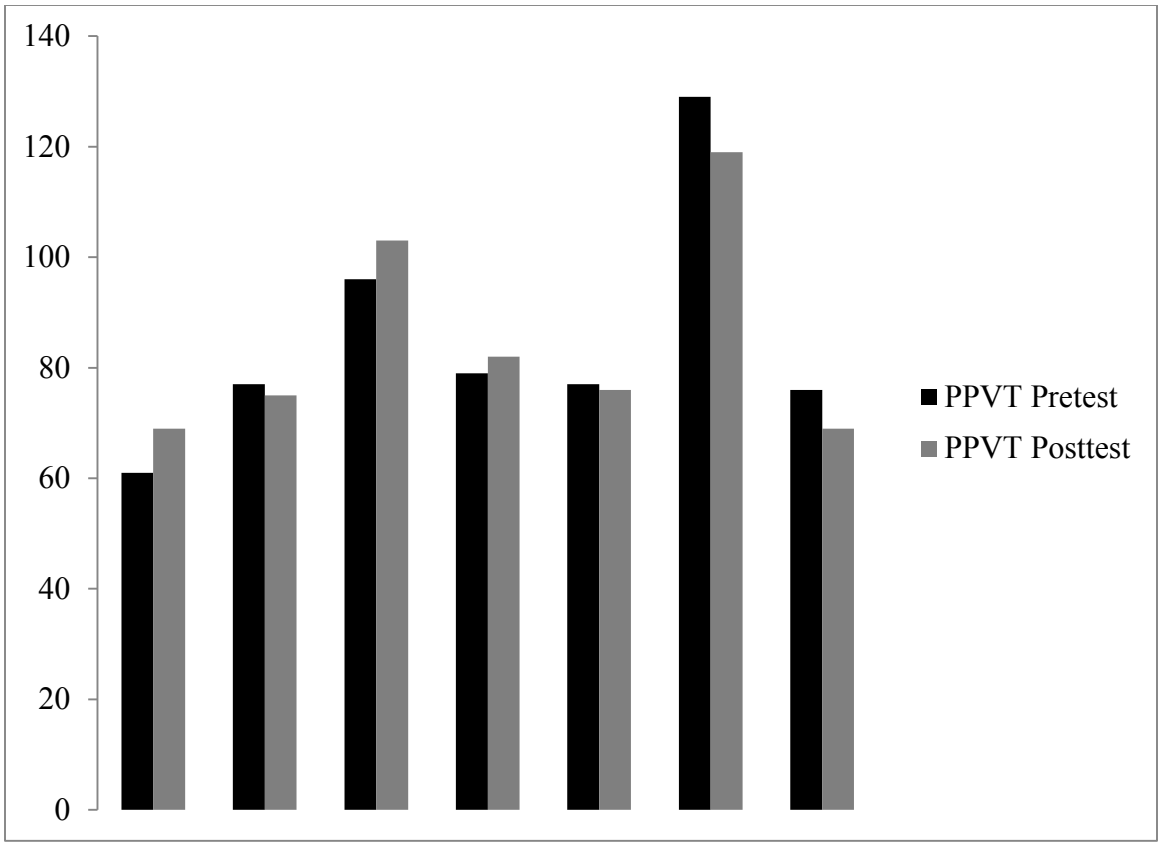

Figure 1. Pre-test vs. post-test PPVT-4 for intervention group.

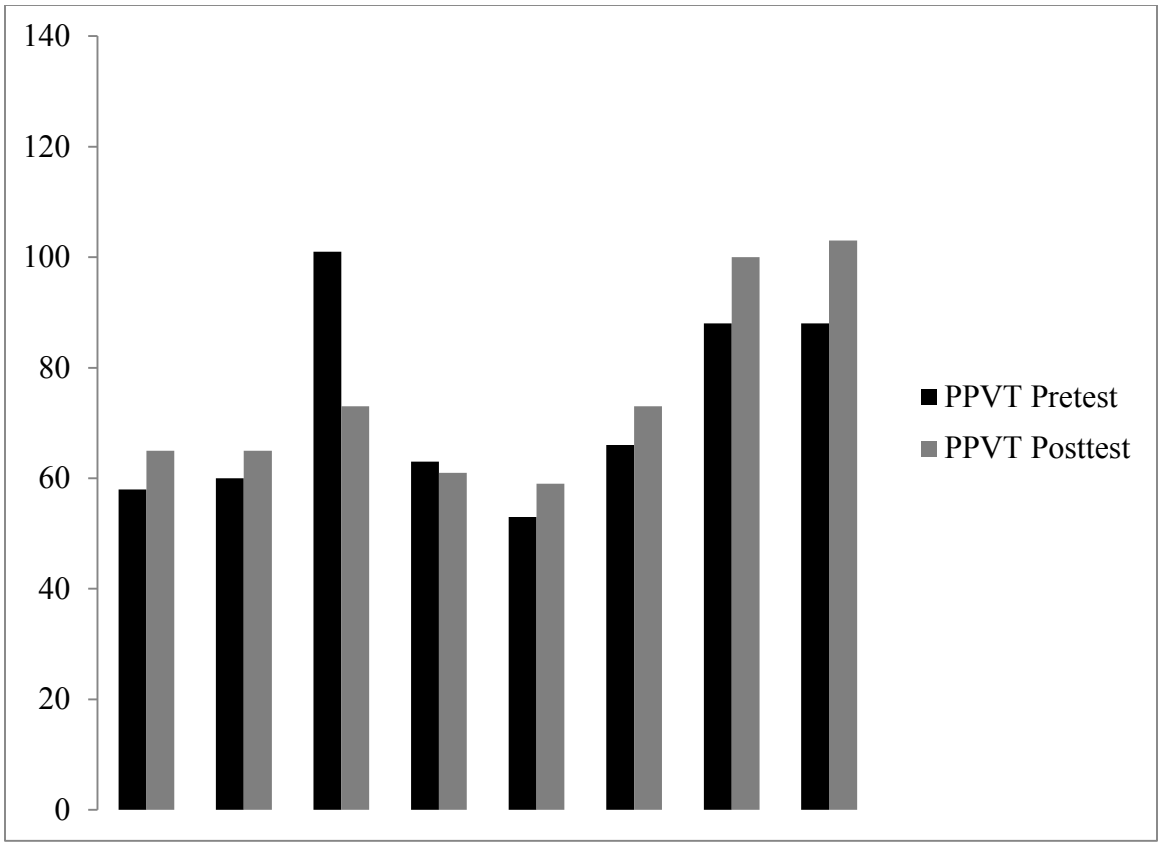

Figure 2. Pre-test vs. post-test PPVT-4 for control group.

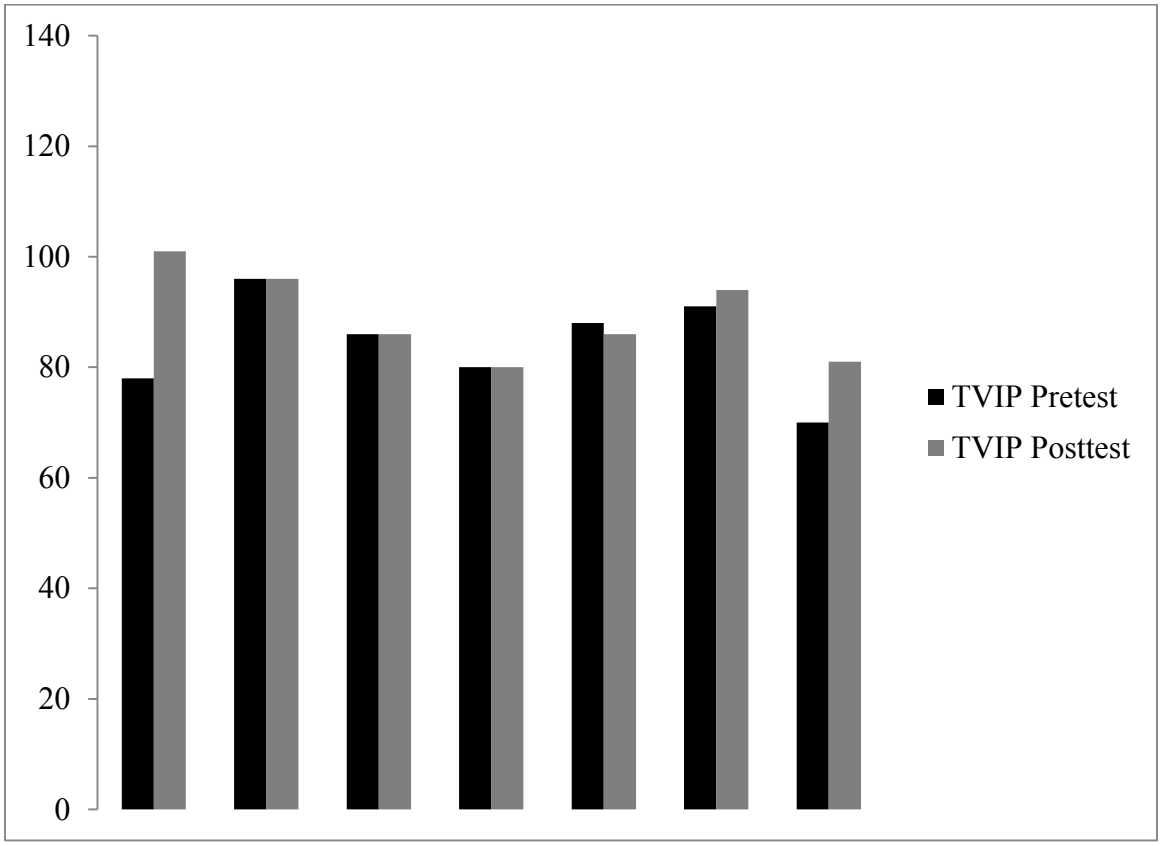

Figure 3. Pre-test vs. post-test TVIP for intervention group.

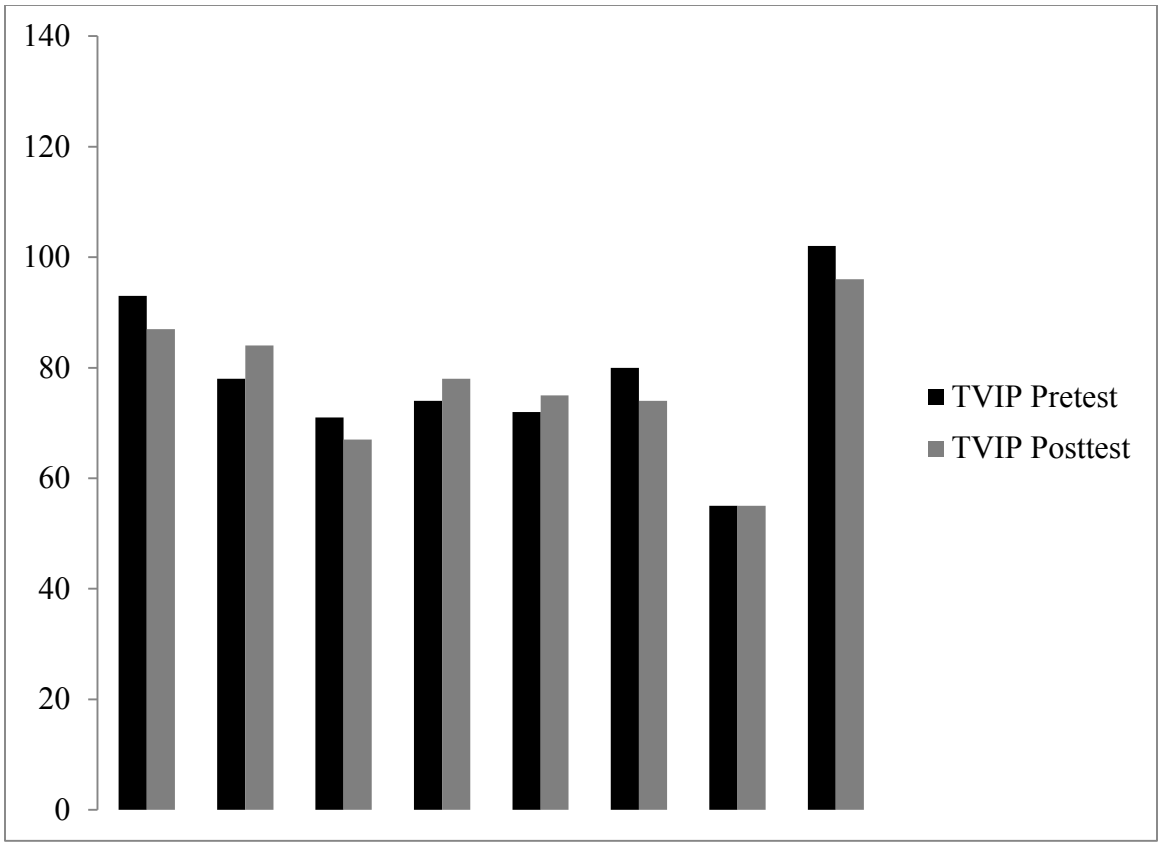

Figure 4. Pre-test vs. post-test TVIP for control group.

The pre-test standard scores on the *PPVT-4* ranged from 53-129, and the range of standard scores on the *TVIP* pre-test was 55-102 for all participants in both intervention and control groups. On the *PPVT-4,* children in the intervention group decreased their standard scores from a median of 77 to a median of 76; however, this change was not statistically significant ($Z = -.085$, $p = .933$). In contrast, the control group increased their *PPVT-4* scores from 64.5 to 69, but this difference was not significant ($Z = -1.262$, $p = .207$). On the *TVIP,* children in the intervention group's median standard scores remained the same with a standard score of 88, while the control group's median *TVIP* standard scores increased from 76 to 76.5. As would be expected, these scores did not differ significantly pre- vs. post-intervention ($Z = -1.461$, $p = .144$, and $Z = -.862$, $p = .389$, respectively).

Individual Participant Data

Percentage differences calculations for the pre-test and post-test scores were calculated using the formula: {(post score–pre score)/ pre score x 100 = % change. The results are posted in Tables 4 and 5.

Table 4

Percentage Changes of Intervention Group

Participant	Percent change *PPVT*	Percent change *TVIP*
K	13.11%	29.5%
J	-2.6%	0%
B	7.29%	0%
L	3.8%	0%
I	-1.3%	0%
E	-7.75%	3.3%
C	-9.21%	15.7%

Table 5

Percentage Changes of Control Group

Participants	Percent change *PPVT*	Percent change *TVIP*
AM	12.07%	-6.45%
N	8.33%	7.69%
NJ	-28%	-5.60%
G	-3.18%	5.4%
AF	11.32%	4.17%
P	10.6%	-7.5%
X	13.64%	0%
C	17.05%	-5.88%

An examination of post-test score differences on the *TVIP* revealed noteworthy improvements for two of the seven participants in the intervention group. As compared to pre-test scores, one participant had a 29.5% increase in the standard score and an increase in the *PPVT-4* score of 13.11% while another participant had a 15.7% increase on the *TVIP* with a decrease of -9.21% on the *PPVT-4*. *TVIP* percentage differences for the intervention group were noted to be similar for four out the seven students, with no changes on their post-test scores as compared to their pre-tests. Three of these four participants also showed minimal to no change on the *PPVT-4* (with percent changes of -2.6%, -1.3%,and 3.8%*)*, while the fourth participant demonstrated an increase of 7.29%. The last student in the intervention group showed an increase of 3.3% on the *TVIP* but a decrease of -7.75% on the *PPVT*.

In the control group of eight participants, six showed gains in the *PPVT-4,* including scores of 8.33%, 10.6%, 11.32%, 12.07%, 13.64% and the most significant increase being 17.05%. Two of the control group showed decreases in their *PPVT-4* scores. One student had a percentage difference of -3.18%, but the other had a signficant decrease of -28%, as compared to the rest of the group. The *TVIP* scores of the control group ranged from an increase of 7.9% to a decreased of -7.5%. Three students increased their *PPVT-4* scores and decreased their *TVIP*. One student demonstrated decreases on both post-tests, most significantly on his *TVIP* score, and one student increased *PPVT-4* scores but remained the same on the *TVIP*.

Bilingual vs. Primary Spanish comparisons

Spanish was the primary home language of seven students in the study (with very little English spoken). As seen in Table 6, the two Spanish speakers in the intervention

group showed increases on the *PPVT-4*. Of these two participants, one of them showed increases on the *TVIP* while the other maintained the *TVIP* pretest score. Of those in the control group, three improved *PPVT-4* scores, two improved *TVIP* scores, and three of the students showed decreases on their *TVIP*.

Table 6

Participants with Spanish as Primary Language

Student	Change in *PPVT* or *TVIP*
K (I)	+*PPVT* +*TVIP*
B (I)	+*PPVT* =*TVIP*
A (C)	+*PPVT* -*TVIP*
N (C)	+*PPVT* +*TVIP*
NJ (C)	-*PPVT* -*TVIP*
G (C)	-*PPVT* +*TVIP*
P (C)	+*PPVT* -*TVIP*

Note: (I): intervention group; (C): control group

+: increase; -: decrease; =: remained the same

There were eight students whose mothers were bilingual and could speak and understand English and Spanish. Five of these were in the intervention group and three were in the control group. As seen in Table 7, two students in the intervention group showed increases on the *TVIP* and decreases on the *PPVT-4* while the other three maintained the pre-test standard scores on the *TVIP*. In addition, one of them showed increases on the *PPVT-4* while the other four showed decreases on their *PPVT-4* standard scores. Of those in the control group, three out of five participants improved *PPVT-4*

scores, with two out of these three showing decreases on the *TVIP*. Two in the control group improved *TVIP* scores: one of these two participants also improved *PPVT-4* scores while the other showed decreases in the *PPVT-4*. Also, two bilingual control group participants showed decreases in their *TVIP* scores while improving their *PPVT-4* scores.

Table 7

Participants from Bilingual Homes

Student	Change in *PPVT* or *TVIP*
J (I)	-*PPVT* =*TVIP*
L (I)	+*PPVT* =*TVIP*
I (I)	-*PPVT* =*TVIP*
E (I)	-*PPVT* +*TVIP*
C (I)	-*PPVT* +*TVIP*
AF (C)	+*PPVT* +*TVIP*
X (C)	+*PPVT* -*TVIP*
M (C)	+*PPVT* -*TVIP*

Note: (I): intervention group; (C): control group

+: increase; -: decrease; =: remained the same

Fidelity, Validity, and Reliability

Procedural fidelity of the interventions was randomly reviewed by video-taping the parents of the intervention group reading with their children. A fidelity checklist similar to Cohen et al. (2012) and Lawerence (2014) was utilized to evaluate each video-recording (see Appendix J). The experimenter and the interpreter completed the checklist. It contained five items on the effective use of dialogic strategies. Each was ranked on a Likert scale, from 1-5 with "1" meaning strongly agree and "5" meaning strongly disagree. Overall, the procedural fidelity was excellent, as all participants rated every item with a "strongly agree" mark.

The reading logs were used to assess fidelity of the number of times that the interventions occurred. After the study, the reading logs were reviewed to assess the amount in caregiver-child reading sessions that occurred during the intervention period. The reading logs revealed that all participants in the intervention group performed dialogic reading with their children three times weekly.

For checks on interrater reliability, ten of the standardized test forms were randomly selected for reliability scoring. A second speech-language pathologist reviewed them to rule out any disagreements or discrepancies in scoring procedures. The percentage of inter-rater agreement was 100% for test scores.

Social Validity

Since there is a need to document the acceptability of the interventions by the participants, social validity measures were implemented. A parental survey was conducted at the end of the study regarding the intervention procedures and methods used in the study. All of the parent participants of the intervention group were asked to

complete a five-question survey rating their experiences. The researcher, accompanied by the interpreter, individually gave each parent the survey. As previously noted, the survey included a five-point, Likert scale and parents were asked to answer each question on a scale from 1-5, one meaning strongly agree and five meaning strongly disagree. All of the parents rated the interventions to be valuable, interesting, and worthy of continuing after completion of the study.

Chapter V

DISCUSSION

The primary purpose of this study was to increase the current knowledge base by assessing English and Spanish vocabulary skills in bilingual children after receiving the intervention of dialogic reading in their home language of Spanish. The hypothesis was that dialogic reading in the primary language would result in increased receptive vocabulary scores in both languages.

The results of the statistical analyses revealed no significant difference between the two groups. While there was no statistical difference in the intervention and control groups as a result of the dialogic reading, there were individual changes among the participants in standard scores on the *PPVT-4* and the *TVIP*. To better understand the impact of dialogic reading interventions, it is necessary to take a closer look at the group and individual comparisons.

Analysis of individual participants

The participant who exhibited improvement on the *PPVT-4* and *TVIP* scores was 48 months old and lived in a home where Spanish was the primary language. There was minimal likelihood that there was any code-switching during the intervention. Before the interventions, her mother reported to have only five books in the home, and they read two times weekly. During the intervention period, a different book was sent each week for eight weeks. Since there were limited books at home, there was probably more motivation regarding the books provided.

Two students in the intervention group were noted to make gains in Spanish vocabulary and decreased their scores on the *PPVT-4* during the intervention period. Both of them were from bilingual homes. Both of these students' caregivers communicated frequently with the researcher during the intervention period either through email or communication at Head Start as they were dropping off their children. It is possible that frequent communication increased the motivation to follow the specific details of the dialogic reading interventions. In addition, the maternal education levels of their mothers were higher as compared to the majority of the participants. Therefore, there was a reason to think that these caregivers related to the possible benefits of the intervention.

Three participants in the intervention group improved their English vocabulary test scores and two of them maintained their pre-test scores on the *TVIP*. The third participant that increased her *PPVT-4* scores also increased her *TVIP* scores. Four of the participants in the intervention group showed regression in their English vocabulary scores on the post-test. Two of these had no change on their *TVIP* scores while the other two also increased their *TVIP* scores. This could be a result of using less English at home during the intervention period, as parents of this group were made aware of the importance of using the home language of Spanish for the interventions.

In the intervention group, only one of the participants showed a decrease in her Spanish vocabulary scores on the *TVIP* post-test, while all other intervention group participants either improved their scores or remained the same. This student was noted to be very shy towards the researcher and to any unfamiliar adult. She was 39 months old, and it was possible that she did not have the understanding or motivation to complete the

testing. Her mother readily spoke and understood English. Her mother was employed by Head Start and often saw the researcher during the study. She made several remarks to the researcher regarding her daughter's interest in the books. The video of the participant and her mother reading together was analyzed for more information. The researcher noted that the student needed a lot of verbal and tactile cues to respond to her mother, and she appeared to be very timid to respond to any of the questions. She rarely answered questions verbally but pointed to pictures and items instead.

Of the eight students in the control group, three increased their Spanish vocabulary skills during the intervention period. While it cannot be proven that the results were directly linked to dialogic reading, there were noted improvements. Since these students' caregivers were asked to continue their typical reading activities at home, the changes were no surprise. All three of these students came from homes where their caregivers spoke Spanish as their primary language. Two of these participants' mothers had ten years of education, and both reported having 40 books at home. The other participant in the control group who increased his Spanish had only five books at home and his mother had five years of education. His mother had met the researcher on a couple of occasions at Head Start. It was possible that his progress was related to a Hawthorne effect, and his mother increased her home literacy activities based on knowing that he would be tested on his vocabulary skills. Her conversations with the researcher led to awareness that there was an upcoming evaluation and that more literacy occasions would likely improve the test scores.

Meanwhile, six of the eight students in the control group showed gains in their English vocabulary skills at the post-test. All of the participants attended English-only

preschools at Head Start, where they were involved in vocabulary-enriching activities in their second language. It makes logical sense that their English skills improved as they had multiple opportunities to practice these skills during the school day with their teachers and with English-speaking peers.

Parental survey analyses

The parental survey analyses revealed that the caregivers in the intervention group completed between six and twelve grades of formal education while the control group had five parents who completed six grades or fewer. While the three children with the most gains on their *TVIP* had caregivers with ten years of formal education or more, the caregiver of the child with the least gains (who actually showed regression) had twelve years of education. Also, there were notable improvements on the *PPVT-4* for children in the control group whose caregivers had only six years of education.

The differences in the median number of weekly book reading for the intervention and control groups showed slight differences at the beginning of the study. However, the range was the same for both groups. Since all caregivers reported the frequency of book reading to be at least three times during the study, this was an increase for those who only read once a week prior to interventions. The number of books at home was the item of the survey that varied most. While some participants only had four books at home, one caregiver reported that their family had 100. There was a correlation between the number of books at home and the frequency of literacy activities between the child and caregiver. The children who had the most books at home were involved in more literacy activities.

The inconsistent results among participants could be related to several factors including age of participants, motivation at the time of testing, attention span, and the

amount of English/Spanish exposure during the intervention period. Typically, young children are difficult to assess in a formal situation. Although the testing duration was short for each test, the students were asked to complete both *PPVT-4* and *TVIP* testing in the same session, lasting approximately fifteen minutes for both tests. The tests were given in random order; sometimes the *PPVT-4* was administered first and other times it was the second test. It was difficult to gauge whether each student truly gave their best performance.

There is a possibility that the *PPVT-4* and *TVIP* are not sensitive to small changes in short increments of time (Correa et al., 2013). It can take long periods of time for the Matthew Effect to start to work in the positive as it takes a lot of word study to generalize specific vocabulary terms which are included in those tests. In addition, the focused vocabulary in the chosen books possibly did not correlate to the type of vocabulary words that were assessed. This possibly contributed to the weaker effects of the intervention.

Limitations

There are several limitations to the present study. The study had a short intervention period and a relatively small number of participants which may have inhibited the study's statistical power. The intervention period may need to last longer and be more intensive for those who come from lower SES backgrounds to achieve results of larger magnitude (Valdez-Menchaca & Whitehurst, 1992). In addition, the small sample limits external validity (Ijalba, 2014). Overall enrollment of Hispanic students was noted to be lower at the time of the study than in previous years. The sample was notably uniform in the country of origin, as well as the SES status. Therefore, there

may be limitations in the generalization to the broader Hispanic/bilingual population (Rodriguez et al., 2009).

This current research only investigated the improvements of receptive vocabulary and did not include any measures for expressive vocabulary (Mendez et al., 2015). Preliminary trials revealed that it was extremely difficult to assess expressive vocabulary in both English and Spanish, secondary to the age of the participants. The participants did not seem to understand how to use "only English" or "only Spanish" words upon request. They seemed confused and unable to consistently use one language expressively. Thus, the study focused on receptive vocabulary abilities.

Another possible weakness of the study was the book choice for the study. The books were chosen because there was little text, forcing the caregivers to elaborate when they read to the children. However, the illustrations were somewhat limited, and the dialogue was dependent upon the caretaker's perception of the intervention (Brannon & Dauksas, 2014). Simple story books with characters, settings, and a plot could have added more to the dialogue and could lend to easier engagement. In addition, there were some limitations with data collection on the amount of reading sessions per week. While data were collected on the amount of book reading for the intervention group, no data were collected for the control group during the course of the study. This prevented the ability to identify if increases in the amount of typical shared reading occurred with the control group as compared to the pre-intervention phase.

Most of the mothers who implemented the interventions were bilingual. However, they were asked to only use Spanish during the interventions. The children participants attended English-only preschools at Head Start. There was no concrete way of

determining if the mothers were speaking only Spanish during the non-recorded and unsupervised interventions or code-switching between English and Spanish (Tsybina & Eriks-Brophy, 2010).

While self-reporting data has proven reliable in previous research, this method may be risky with certain populations. The current study had mothers report their book reading on the honor system. They were given a reading log that had sections for them to document the days they read with their children. While this data-keeping method is cost- and time-efficient, it left room for discretion. Some of their responses could have been subject to social acceptance and may belie intention versus the reality of what occurred. The researcher had no known reason to doubt the parental reading logs; however, caution should be implemented when interpreting and generalizing the results (Niklas et al., 2016; Rodriguez et al., 2009; Tsybina & Eriks-Brophy, 2010).

The intensity of the interventions relied completely on the caregivers. The only requirements of the caregivers were to use the dialogic strategies of CROWD and PEER while reading with their children for a minimum of three times weekly. The individual differences in reading styles, personalities, and education level of the caregivers were not taken into account. The mothers could have implemented the dialogic reading techniques differently than they were trained, thus possibly explaining the null results (Reese et al., 2010). Future studies may employ mandatory video recordings of each session to allow for more control of the intensity and fidelity of treatment.

Recommendations for future research

The results of this study neither support nor negate the use of dialogic reading. Because bilingual students tend to take longer to exhibit gains in language, it is possible

that the limited increases in vocabulary were related to this factor. The majority of the participants may have been processing the information, learning the vocabulary, embedding the terms neurologically, but not ready to demonstrate their language skills. Conducting the study over a longer period of time may have yielded more definitive results.

Bilingual books were used for this study; however, this component is not mandatory. While using the primary language is helpful, bilingual books are not always easily accessible. In addition, the option of using books in the targeted language of growth would eliminate the code-switching opportunities that could occur when both languages are written on the page.

The *PPVT-4* and the *TVIP* were utilized in this study. Both of these assessments examine children's general vocabulary knowledge. The *PPVT-4* was originally developed to assess native English speakers. Therefore, it may be more suitable to develop researcher-based assessments that correlate to the age and demographics of the participants (Wing-Yin Chow et al., 2010). It would also benefit future studies to include the evaluation of general vocabulary knowledge along with vocabulary specific to the chosen books for the study. Incorporating measures to evaluate expressive language would further the research, and more rigorous methodologies would help to identify culturally appropriate intervention approaches to benefit pre-academic skills of the bilingual preschoolers.

Chapter VI

CONCLUSION

In order to serve children and families effectively, it is important to engage in culturally competent collaborations and integrate these into the interventions that are suggested and implemented (Rodriguez et al., 2009). Inquiring about home literacy and academic practices aids in implementing interventions that correlate to the lifestyle and relations between family members. Hispanic students with limited vocabulary skills are at high risk of lower academic outcomes, even as early as the preschool years. Therefore, including effective vocabulary instruction is critical for their academic success (Mendez et al., 2015). In this study, an empirically-supported intervention, dialogic reading, was utilized to improve vocabulary skills for bilingual preschoolers. This intervention incorporated parent modeling, feedback, and questioning, which may elicit more engagement between the parent and child, as well as increased vocabulary skills in the primary language (Brannon & Dauksas, 2014).

The training of parents of bilingual preschoolers in dialogic reading did not result in significant increases in English and Spanish vocabulary words as the researcher anticipated. However, the training of parents on dialogic interactions may allow them to supplement early intervention services and to allow the parents to feel more empowered to create learning opportunities for their children (Tysbina & Eriks-Brophy, 2010). In future research with larger samples and a longer intervention period, there is hope to find

more benefits of dialogic reading on the vocabulary development of bilingual preschoolers.

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Appendix A:

Institutional Review Board Approval

VALDOSTA STATE UNIVERSITY

Institutional Review Board (IRB) for the Protection of Human Research Participants

EXPEDITED PROTOCOL APPROVAL

Protocol Number: IRB-03707-2018 **Responsible Researcher:** Ms. Janet Williams

Supervising Faculty: Dr. Mary Gorham-Rowan

Project Title: *The Impact of Parent-Led Dialogic Reading on English and Spanish Vocabulary.*

Level of Risk: ☒ Minimal ☐ More than Minimal

Type of Review: ☒ Expedited ☐ Convened (Full Board)

Approval Category: **6 & 7**

Approval Date: **10.23.2018**

Expiration Date: **10.22.2019**

Consent Requirements:

- ☐ Adult Participants – Written informed consent with documentation (signature)
- ☐ Adult Participants – Written informed consent with waiver of documentation (signature)
- ☐ Adult Participants – Verbal informed consent
- ☐ Adult Participants – Waiver of informed consent
- ☒ Minor Participants – Written parent/guardian permission with documentation (signature)
- ☐ Minor Participants – Written parent/guardian permission with waiver of documentation (signature)
- ☐ Minor Participants – Verbal parent/guardian permission
- ☐ Minor Participants – Waiver of parent/guardian permission
- ☐ Minor Participants – Written assent with documentation (signature)
- ☒ Minor Participants – Written assent with waiver of documentation (signature)
- ☐ Minor Participants – Verbal assent
- ☐ Minor Participants – Waiver of assent
- ☐ Waiver of some elements of consent/permission/assent

Approval: This research protocol is **approved as presented.** Your approved consent form(s), with IRB approval stamp are attached. If you prefer the original stamped consent, please email tmwright@valdosta.edu and the form will be sent via inter-office mail, or you may come by the OSPRA office to obtain the original. Please see page 2 for additional important information for researchers.

Comments:

Elizabeth Ann Olphie *10.23.2018*

Elizabeth Ann Olphie, IRB Administrator Date

Thank you for submitting an IRB application.

Please direct questions to irb@valdosta.edu or 229-253-2947.

Form Revised: 06.02.16

ADDITIONAL INFORMATION FOR RESEARCHERS:

If your protocol received expedited approval, it was reviewed by a two-member team, or, in extraordinary circumstances, the Chair or the Vice-Chair of the IRB. Although the expediters may approve protocols, they are required by federal regulation to report expedited approvals at the next IRB meeting. At that time, other IRB members may express any concerns and may occasionally request minor modifications to the protocol. In rare instances, the IRB may request that research activities involving participants be halted until such modifications are implemented. Should this situation arise, you will receive an explanatory communiqué from the IRB.

Protocol approvals are generally valid for one year. In rare instances, when a protocol is determined to place participants at more than minimal risk, the IRB may shorten the approval period so that protocols are reviewed more frequently, allowing the IRB to reassess the potential risks and benefits to participants. The expiration date of your protocol approval is noted on the approval form. You will be contacted no less than one month before this expiration date and will be asked to either submit a final report if the research is concluded or to apply for a continuation of approval. It is your responsibility to submit a continuation request in sufficient time for IRB review before the expiration date. If you do not secure a protocol approval extension prior to the expiration date, you must stop all activities involving participants (including interaction, intervention, data collection, and data analysis) until approval is reinstated.

Please be reminded that you are required to seek approval of the IRB before amending or altering the scope of the project or the research protocol or implementing changes in the approved consent process/forms. You are also required to report to the IRB, through the Office of Sponsored Programs & Research Administration, any

unanticipated problems or adverse events that become apparent during the course or as a result of the research and the actions you have taken.

Please refer to the IRB website (http://www.valdosta.edu/ospra/HumanResearchParticipants.shtml) for additional information about Valdosta State University's human protection program and your responsibilities as a researcher.

13. Selection of Participants and Voluntariness:
Two equal groups of bilingual children whose primary home language is Spanish will be recruited from two separate Head Start locations within Fayette County, Georgia. Selection will be based on teacher identification and parental consent. Members of the preschool staff will be asked to identify students who speak Spanish as their primary language. All participants will be screened for any vision or hearing concerns. Children who show any signs of developmental delays will not be considered for the study. Informed-consent letters written in English and Spanish will be sent to the parents of the identified children. An interpreter will perform follow-up phone calls to answer any questions about the study.

An initial questionnaire (attached) will be given to determine if there are any significant differences between the two groups that could impact the study. Items on the questionnaire will include information regarding parental education, parent's native language,primary language spoken in the home, amount of time English is spoken in the home, number of books in the home, and the amount of time that parents spend reading or performing other literacy behaviors with their children.

14. Informed Consent or Parental Permission/Child Assent:
Informed-consent letters written in English and Spanish will be sent to the parents of the identified children. An interpreter will perform follow-up phone calls to answer any questions about the study. The parental consent letter is attached to this application.

15. Compensation:
Participants will not receive any form of payment or compensation.

16. Deception:
This does not apply to this study.

17. Research Protocol:
Parents will be given parental consent forms that explain all of the procedures of the study. These will be offered in English and Spanish.

Prior to the initiation of the study, the experimenter (Janet D. Williams) will provide "live" training on the process of dialogic reading for the adult readers. Dialogic reading is a method of making reading more enriching and fun by using conversational tactics during shared reading time. She will utilize examples and provide each adult reader with video-training as supplemental training. On the training videos, the experimenter will read a bilingual, preschool-level book and provide examples and methods of dialogic reading. The interpreter will repeat the same procedures in Spanish. There will be sticky notes on pages of each book as reminders of times to present dialogue, as well as examples of appropriate dialogue. These training videos will be posted to YouTube and the participants will be given a link to access them to review as needed.

Following the informed-consent procedures and adult reader training, potential participants will be given a standardized vocabulary assessment in the area of receptive vocabulary. The Peabody Picture Vocabulary Test-4 (PPVT) (Dunn & Dunn, 2007). and the Test de Vocabulario en Imagenes Peabody(TVIP) (Dunn, Lugo, Padilla, & Dunn, 1986) will be utilized for the pre-test and the post-test assessments. Both tests, published by Pearson, were designed to measure listening (receptive) vocabulary. The TVIP is Pearson's Spanish version of the PPVT-4. Both

English and Spanish versions will be given to each participant. With the implementation of the assessments, the same tests will be used twelve weeks apart. The Expressive One-Word Picture Vocabulary Test (EOWPVT) will be utilized to assess expressive vocabulary as a pre-test and post-test measure, as well. An interpreter will aid in the administration of all assessments.

Based on random selection, the participants will be divided into two equal groups. One half of the families that agree to participate will be assigned to an intervention group at home. The other half will be assigned to control group at school. For the intervention group, parents will be asked to read with their children at home in Spanish, using dialogic reading. Videos in Spanish will be posted each week on YouTube as examples. The chosen books will be paired with things that the children are learning at school and related to the teaching theme of their teachers. Parents will be asked to read each book three times per week in their home. There will be sticky notes on pages of the books (written in Spanish) to remind parents of how to interact on each page. A different book will be sent home each week for a total of 8 weeks. The control group will continue to participate in thematic activities at school, along with typical classroom read-alouds.

The child may be audio/video-taped to gather anecdotal information to gauge the child's interest in the activity, as well as their responses to the intervention. The recordings will be stored on the researcher's personal computer which is password protected. The recordings will be kept for three years following the conclusion of the project, along with the other collected data of the project.

At the end of the eight-week-intervention period, all student participants will be given the standardized receptive and expressive post-tests. If there are any questions during the intervention period, Janet D. Williams will be readily available to answer the questions. She will also have an interpreter who speaks fluent Spanish, if needed.

18. Privacy and Confidentiality:
The participants' names will not be listed in the reports. However, the participants will be assigned numbers (ex. Participant #1) to avoid breaching confidentiality. Audio/video recordings will be stored with other research data on a password protected computer owned by the researcher.

19. Risks:
This proposed study does not exhibit risks that could harm the participants in a physical, psychological, social, or economic manner.

20. Benefits:
The process of dialogic reading has been shown to aid in vocabulary development, which will also improve literacy skills. The proposed research is expected benefit the participants by incorporating more parental involvement in the educational process.

21. Prior Research:
Not Applicable

Appendix B:

Letter of Approval

Resurgent Education And Community Health Services, Inc.

"A Total Approach To Family Services"

July 17, 2018

This letter will confirm our recent conversation/e-mail exchange. I approve of Janet D. Williams completing a doctoral dissertation at Valdosta State University entitled "Dialogic reading: The effectiveness on vocabulary growth for bilingual preschoolers."

I readily give my permission for Mrs. Williams to utilize our Head Start facilities and work with students at these facilities. Parental permission will be obtained for each participant and information regarding the research will only apply towards this dissertation project.

Participants will be three different groups of bilingual, Hispanic students and their parents. The study will involve training parents how to read with their children in a way that expands the dialogue/conversation during reading. An interested by-product of the research is the increase of vocabulary skills, as well as parental involvement.

The granted permission extends to any future revisions and editions of her dissertation, including non-exclusive world rights in all languages, to the electronic publication of her dissertation by Valdosta State University, and to the prospective publication of her dissertation by ProQuest. ProQuest may supply copies of her dissertation on demand.

Sincerely,

Dr. Irma Ellington, Executive Director of REACH Services and Fayette County Head Start

PERMISSION GRANTED FOR THE USE REQUESTED ABOVE:

Dr. Irma Ellington, Director, REACH Services

7/17/2018
Date:

155 Bradford Square, Suite D • Fayetteville, Georgia 30215 • Tel: (770) 461-6527 • Fax: (770) 460-6437

Appendix C:

Parent Permission and Child Assent Form (English and Spanish)

VALDOSTA STATE UNIVERSITY

Parent/Guardian Permission for Child's/Ward's Participation in Research

You are being asked to allow your child/ward to participate in a research project entitled "The Impact of Parent-Led Dialogic Reading on English and Spanish Vocabulary." This research project is being conducted by Janet D. Williams, a doctoral student in Speech-Language Pathology at Valdosta State University. The researcher along with an interpreter will explain to you in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks to your child. You may ask the researcher any questions you have to help you understand this study and your child's possible participation in it. A basic explanation of the research is given below. From this point on in this form, the term "child" is used for either a child or a ward. Please read the remainder of this form carefully and ask the researcher any questions you may have. The University asks that you give your signed permission if you will allow your child to participate in this research project.

Purpose of the Research: This study involves research. The purpose of the study is to examine the benefits of dialogic reading/engaging in conversation during reading (in the primary language) to preschool children to improve their vocabulary skills. The purpose may be further defined as the comparison of vocabulary growth in English and Spanish after preschoolers receive interventions in their primary language of Spanish.

Procedures: If you allow your child to participate in this study, they will either participate in reading at home with you (the parents), or be assigned to a control group at school. The selection of students who participate actively versus those who are in the control group will be randomly assigned. All children in the study will be given standardized pre-tests in English and Spanish vocabulary to establish a baseline of their vocabulary skills. They will also be given the same assessments post-intervention to determine vocabulary growth. All testing will be performed at Headstart.

Prior to initiation of the study, you (the parents) will receive training on the process of dialogic reading if your child was randomly assigned to the participating group. This intervention involves engaging the child in conversation during the shared reading of a story/looking at a picture book. Your training will be available "live" or through the use of videos posted on a shared video website. "Live" training will be offered at Head Start OR the researcher will come to your home to offer the training. Training will be provided in English and in Spanish. Basically, you (the parents) will engage in conversation with your child, in your primary language of Spanish, while looking at picture books. The dialogue will be regarding the pages of preschool books. The children in the control group will participate in school as usual and their parents will not receive direct training of dialogic reading.

You (the parents) will be asked to fill out an optional questionnaire that is attached to this permission form. The form will only be used to provide additional information that directly applies to the research. It will not be shared with any outside parties and will be kept confidential.

This study will take place over an eight- week period and sessions of those chosen as participants will occur three times weekly. If your child is part of the participating group, you will be asked to read (in Spanish) an assigned book that correlates to the preschool theme of the week at Headstart. The books will have very limited text and will be written in English and Spanish. You will be asked to read the books three times weekly and to document your reading times on a reading log. Janet Williams, the primary researcher, will come to your home weekly to switch out the books and to collect your reading logs. Instructional videos that correlate with the weekly books

Parent/Guardian's Initials: _____

will be posted and available on a shared video website. The videos will be provided in English and in Spanish. There will be approximately eleven other people in this study.

Possible Risks or Discomfort: Although there are no known risks associated with these research procedures, it is not always possible to identify all potential risks of participating in a research study. However, the University has taken reasonable safeguards to minimize potential but unknown risks. By agreeing for your child to participate in this research project, you are not waiving any rights that you may have against Valdosta State University for injury resulting from negligence of the University or its researchers.

Potential Benefits: Although your child may not benefit directly from this research, your child's participation will help the researcher gain additional understanding of the impact of dialogic reading on vocabulary development. The possible benefits of dialogic reading/participation in the study are improving the participant's expressive and receptive vocabulary skills in English and Spanish. Vocabulary development is a predictor or academic achievement and correlates with improved reading abilities.

Costs and Compensation: There are no costs to you and there is no compensation (no money, gifts, or services) for your participation in this research project.

Assurance of Confidentiality: Valdosta State University and the researcher will keep your child's information confidential to the extent allowed by law. Members of the Institutional Review Board (IRB), a university committee charged with reviewing research to ensure the rights and welfare of research participants, may be given access to your child's confidential information.

Your child's privacy and the confidentiality of his/her data will be protected by only allowing persons implementing the study to have access to your child's records. Your name or your child's name will not be used in the study; however, he/she will be given a number that identifies him/her.

If it becomes necessary, the Institutional Review Board may need to review the study records. If this happens, information that can be linked to your child will be protected to the extent permitted by law. Your child's research records will not be released without your consent unless required by law or a court order.

If you choose to allow your child to participate, your child may be audio/video-taped to gather anecdotal information to gauge the child's interest in the activity, as well as their responses to the intervention. The recordings will be stored on the researcher's personal computer which is password protected. Recordings will be kept for three years following the conclusion of the project, along with the other collected data of the project.

Voluntary Participation: Your decision to allow your child to participate in this research project is entirely voluntary. If you agree now to allow your child to participate and change your mind later, you are free to remove your child from the study. Your decision not to allow your child to participate at all or to stop participating at any time in the future will not have any effect on any rights your child has or any services you are otherwise entitled to from Valdosta State University.

Information Contacts: Questions regarding the purpose or procedures of the research should be directed to Janet D. Williams at 770-363-1929 or janetwilliams@valdosta.edu. This study has been approved by the Valdosta State University Institutional Review Board (IRB) for the Protection of Human Research Participants. The IRB, a university committee established by Federal law, is responsible for protecting the rights and welfare of research participants. If you have concerns or questions about your rights as a research participant, you may contact the IRB Administrator at 229-253-2947 or irb@valdosta.edu.

Parent/Guardian's Initials: _____

Agreement to Participate: The research project and my child's (or ward's) role in it have been explained to me, and my questions have been answered to my satisfaction. I grant permission for my child to participate in this study. By signing this form, I am indicating that I am either the custodial parent or legal guardian of the child. I have received a copy of this permission form.

I would like to receive a copy of the results of this study: _____ Yes _____ No

Mailing Address: _____

E-mail Address: _____

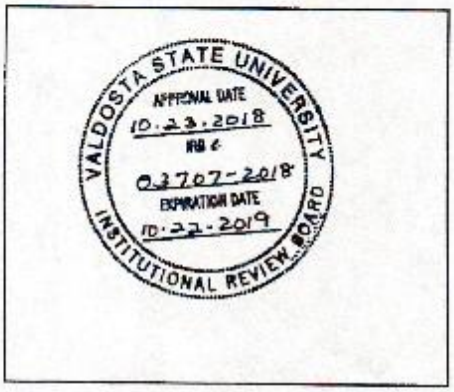
_____
Printed Name of Child/Ward

_____
Printed Name of Parent/Guardian

_____
Signature of Parent/Guardian Date

_____
Signature of Person Obtaining Permission Date

This research project has been approved by the Valdosta State University Institutional Review Board for the Protection of Human Research Participants through the date noted below:



Parent Permission and Child Assent Form (Spanish)

UNIVERSIDAD DEL ESTADO DE VALDOSTA

Permiso de los padres / tutores para la participación del niño / estudiante en la investigación

Se le solicita que permita que su hijo / estudiante participe en un proyecto de investigación titulado "El Impacto de la lectura dialógica dirigida por los padres en inglés y en español." Este proyecto de investigación está siendo llevado a cabo por Janet D. Williams, una estudiante de doctorado en patología del habla y el lenguaje en la Universidad Estatal de Valdosta. El investigador, junto con un intérprete, le explicará en detalle el propósito del proyecto, los procedimientos que se utilizarán y los posibles beneficios y posibles riesgos para su hijo. Puede hacerle al investigador cualquier pregunta que tenga para ayudarlo a comprender este estudio y la posible participación de su hijo en él. Una explicación básica de la investigación se da a continuación. A partir de este punto, en esta forma, el término "niño" se usa para un niño o un estudiante. Lea detenidamente el resto de este formulario y pregúntele al investigador si tiene alguna pregunta. La Universidad le pide que dé su permiso firmado si permitirá que su hijo participe en este proyecto de investigación.

Propósito de la investigación: Este estudio involucra investigación. El propósito del estudio es examinar los beneficios de la lectura dialógica / entablar conversación durante la lectura (en el idioma primario) para niños en edad preescolar para mejorar sus habilidades de vocabulario. El propósito puede definirse aún más como la comparación del crecimiento del vocabulario en inglés y español después de que los preescolares reciben intervenciones en su idioma primario de español.

Procedimientos: Si permite que su hijo participe en este estudio, participarán en la lectura en casa con usted (los padres) o serán asignados a un grupo de control en la escuela. La selección de los estudiantes que participan activamente frente a los que están en el grupo de control se asignará al azar. A todos los niños en el estudio se les darán pruebas previas estandarizadas de vocabulario en inglés y español para establecer una línea de base de sus habilidades de vocabulario. También se les dará las mismas evaluaciones después de la intervención para determinar el crecimiento del vocabulario. Todas las pruebas se realizarán en Head Start.

Antes de iniciar el estudio, usted (los padres) recibirá capacitación sobre el proceso de lectura dialógica si su hijo fue asignado al azar al grupo participante. Esta intervención implica entablar conversación con el niño durante la lectura compartida de un cuento / mirar un libro ilustrado. Su entrenamiento estará disponible "en vivo" o mediante el uso de videos publicados en un sitio web de videos compartido. La capacitación "en vivo" se ofrecerá en Head Start o el investigador irá a su casa para ofrecer la capacitación. La capacitación se impartirá en inglés y en español. Básicamente, usted (los padres) conversará con su hijo, en su idioma principal de español, mientras mira libros ilustrados. El diálogo será sobre las páginas de libros preescolares. Los niños en el grupo de control participarán en la escuela como de costumbre y sus padres no recibirán capacitación directa en lectura dialógica.

Se le pedirá a usted (a los padres) que complete un cuestionario opcional que se adjunta a este formulario de permiso. El formulario sólo se utilizará para proporcionar información adicional que se aplique directamente a la investigación. No se compartirá con terceros y se mantendrá confidencial.
Este estudio se llevará a cabo durante un período de ocho semanas y las sesiones de los elegidos como participantes se llevarán a cabo tres veces por semana. Si su hijo es parte del grupo participante, se le pedirá que lea (en español) un libro asignado que se relaciona con el tema preescolar de la semana en Head Start. Los libros tendrán un texto muy limitado y estarán escritos en inglés y español. Se le pedirá que lea los libros tres veces por semana y que documente sus tiempos de lectura en un registro de lectura. Janet Williams, la investigadora principal, vendrá a su casa semanalmente para cambiar los libros y recoger sus registros de lectura. Los videos

instructivos que se correlacionan con los libros semanales se publicarán y estarán disponibles en un sitio web de videos compartidos. Los videos serán provistos en inglés y en español. Habrá aproximadamente otras once personas en este estudio.

Posibles riesgos o molestias: aunque no se conocen riesgos asociados con estos procedimientos de investigación, no siempre es posible identificar todos los riesgos potenciales de participar en un estudio de investigación. Sin embargo, la Universidad ha tomado medidas razonables para minimizar los riesgos potenciales pero desconocidos.

Al aceptar que su hijo participe en este proyecto de investigación, no está renunciando a ningún derecho que pueda tener en contra de Valdosta State University por lesiones resultantes de negligencia de la Universidad o sus investigadores.

Beneficios potenciales: Aunque es posible que su hijo no se beneficie directamente de esta investigación, su participación ayudará al investigador a obtener una comprensión adicional del impacto de la lectura dialógica en el desarrollo del vocabulario. Los posibles beneficios de la lectura / participación dialógica en el estudio son mejorar las habilidades de vocabulario expresivo y receptivo del participante en inglés y español. El desarrollo del vocabulario es un predictor o logro académico y se correlaciona con la mejora de las habilidades de lectura.

Costos y compensación: No hay costos para usted y NO hay compensación económica (dinero, regalos o servicios) por su participación en este proyecto de investigación.

Garantía de confidencialidad: Valdosta State University y el investigador mantendrán la confidencialidad de la información de su hijo en la medida en que lo permita la ley. Los miembros de la Junta de Revisión Institucional (IRB), un comité universitario encargado de revisar la investigación para garantizar los derechos y el bienestar de los participantes de la investigación, pueden tener acceso a la información confidencial de su hijo.

La privacidad de su hijo y la confidencialidad de sus datos estarán protegidos al permitir que solo las personas que implementan el estudio tengan acceso a los registros de su hijo. Su nombre o el nombre de su hijo no se utilizarán en el estudio; sin embargo, se le dará un número que lo identifique.

Si es necesario, la Junta de Revisión Institucional puede necesitar revisar los registros del estudio. Si esto sucede, la información que se puede vincular a su hijo estará protegida en la medida en que lo permita la ley. Los registros de investigación de su hijo no se divulgarán sin su consentimiento, a menos que lo exija la ley o una orden judicial.

Si elige permitir que su hijo participe en este estudio, su hijo puede ser grabado en audio o video. Las grabaciones se almacenarán de forma segura y solo el equipo de investigación tendrá acceso a las grabaciones. Las grabaciones se mantendrán durante doce meses y luego se borrarán.

Participación voluntaria: Su decisión de permitir que su hijo participe en este proyecto de investigación es completamente voluntaria. Si está de acuerdo ahora en permitir que su hijo participe y cambie de opinión más tarde, es libre de retirarlo del estudio. Su decisión de no permitir que su hijo participe en absoluto o dejar de participar en cualquier momento en el futuro no tendrá ningún efecto sobre los derechos que tenga su hijo o los servicios a los que tiene derecho en la Universidad Estatal de Valdosta.

Contactos de información: las preguntas sobre el propósito o los procedimientos de la investigación deben dirigirse a Janet D. Williams al 770-363-1929 o janetwilliams@valdosta.edu. Este estudio ha sido aprobado por la Junta de Revisión Institucional (IRB, por sus siglas en inglés) de Valdosta State University para la Protección de Participantes en Investigación Humana. El IRB, un comité universitario establecido por la ley federal, es responsable de proteger los derechos y el bienestar de los participantes de la investigación. Si tiene inquietudes o

preguntas sobre sus derechos como participante en una investigación, puede comunicarse con el Administrador de IRB al 229-253-2947 or irb@valdosta.edu.

Acuerdo para participar: el proyecto de investigación y el rol de mi hijo (o estudiante) en el mismo, me han sido explicados y mis preguntas han sido respondidas satisfactoriamente. Doy permiso para que mi hijo participe en este estudio. Al firmar este formulario, estoy indicando que soy el padre custodio o el tutor legal del niño. He recibido una copia de este formulario de permiso.

Me gustaría recibir una copia de los resultados de este estudio: _____ *Si* _____ *No*

Dirección de correo: _____

Dirección de correo electrónico: _____

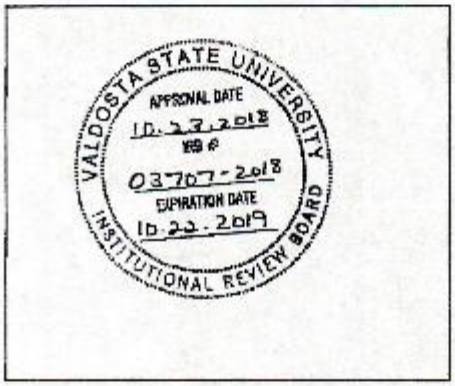
_____
Nombre impreso del niño / salon

_____
Nombre impreso del padre / madre / tutor

_____
Firma del padre / madre / tutor Fecha

_____
Firma de la persona que obtiene el permiso Fecha

Este proyecto de investigación ha sido aprobado por la Junta de Revisión Institucional de la Universidad Estatal de Valdosta para la Protección de Participantes de Investigación Humana hasta la fecha que se indica a continuación:



Appendix D:

Telephone Scripts in English and Spanish

Phone Conversation Script for Participants

Jan Williams is our speech therapist at Head Start and works with many of our students. She is currently doing some research on the benefits of parents reading at home with their children. She is particularly focused on increasing the vocabulary skills of bilingual children.

Would you be willing to participate in the study? It would only require you to talk with Mrs.Williams for a few minutes for her to give you some ideas of a new way to read with your child. She will also post videos on Youtube for you to watch if you need reminders. I (Mrs. Eileen Hernandez) will also be posting the same videos, but in Spanish. Your child will be given a different book to read each week and you will be asked to read the book three times a week in Spanish. The study will last around eight weeks.

Mrs. Williams will be working with a total of approximately twenty families. She will ask only half of the families to participate and the other half will just attend Head Start as usual. However, all of the students will participate in pretests and posttests of their vocabulary skills. She is trying to see if those who participate in the reading activities at home in Spanish show more improvement in their English and Spanish vocabulary. The non-participating students will have the opportunity to perform the reading activities after the study is over.

Mrs. Williams will get back to you with a date that the study will start (it will be in January 2019) if you agree to participate.

Thanks so much!

Libreto para conversación telefónica con participantes

Jan Williams es nuestra terapista de habla de Head Start, quien trabaja con muchos de nuestros estudiantes. Actualmente, ella está realizando una investigación sobre los beneficios de la lectura en el hogar entre padres de familia e hijos. Ella está particularmente enfocada en aumentar las destrezas de vocabulario de los niños/as bilingües.

Estaría usted dispuesto/a a participar en el estudio? Solamente requerirá que hable con la Sra. Williams por unos minutos para que ella le indique algunas ideas nuevas para leer con su niño/niña. Ella también posteará videos en Youtube para que los vea si necesita un recordatorio de cómo realizar la lectura. Yo (Eileen Hernández) también postearé los mismos videos en español. Su niño/niña recibirá un libro diferente para leer cada semana, y a usted se le pedirá que lea el libro con su niño/niña tres veces a la semana, en español. El estudio durará alrededor de ocho semanas.

La Sra. Williams estará trabajando con un total de veinte familias aproximadamente. Ella le pedirá a la mitad de las familias que participe en el estudio, y la otra mitad sólo asistirá al Head Start como usualmente lo hacen. Todos los estudiantes participarán en exámenes antes de comenzar el estudio y al terminar el estudio. Ella estará viendo si los que participaron en las actividades de lectura en el hogar, mejoran el vocabulario en inglés y español. Los estudiantes no participantes tendrán la oportunidad de realizar las actividades de lectura después que el estudio/investigación termine.

La Sra. Williams se comunicará con usted para indicarle la fecha cuando el estudio iniciará (será en enero del 2019) si usted decide participar.

¡Muchisímas gracias!

Appendix E:

Parent Questionnaire (English and Spanish)

Parent Survey for Dialogic Reading

1. Child participant's date of birth: _____
2. Child participant's gender: MALE or FEMALE
3. Was the child born in the United States? YES of NO
4. What is the primary language spoken at home? _____
5. How many years has your child been to preschool? _____
6. What is parent reader's date of birth? _____
7. What is the adult reader's gender? MALE or FEMALE
8. Where was the adult reader born? _____
9. How long has adult reader lived in the United States? _____
10. What language does the adult reader speak at home? _____
11. What level of education was completed by adult reader? _____
12. How often does an adult read with the child participant? _____
13. How many children's books are in the home? _____

Parent Questionnaire (Spanish)

Encuesta para padres sobre lectura dialógica

1. Fecha de nacimiento del participante: _____
2. Género del participante: MACHO o MUJER
3. ¿Nació el niño en los Estados Unidos? SÍ o NO
4. ¿Cuál es el idioma principal que se habla en el hogar? _____
5. ¿Cuántos años ha estado su hijo en preescolar? _____
6. ¿Cuál es la fecha de nacimiento del padre lector? _____
7. ¿Cuál es el género del lector adulto? HOMBRE O MUJER
8. ¿Dónde nació el lector adulto? _____
9. ¿Cuánto tiempo ha vivido el lector adulto en los Estados Unidos? _____
10. ¿Qué idioma habla el lector adulto en casa? _____
11. ¿Qué nivel de educación completó un lector adulto? _____
12. ¿Con qué frecuencia lee un adulto con el niño participante? _____
13. ¿Cuántos libros para niños hay en el hogar? _____

Appendix F:

List of books used in the study

Intervention week	Book Name	Target vocabulary
Week 1	Animals	Cat, dog, horse,cow, rabbit,sheep, goat, chicken, mouse, pig, duck
Week 2	Food	Bread, fruits, egg, cheese, ice cream, fruit juice, cake, chicken, cookie, ham, milk
Week 3	Toys	Doll, ball, blocks, car, fish, drum, teddy bear, puzzle, tricycle, skates, crayons
Week 4	Clothes	Sweater, t-shirt, dress, pants, skirt, shorts, shoes, pajamas, hat, socks, coat
Week 5	Numbers	Numbers one to twenty
Week 6	Family	Mother, father, parents, sister, brother, uncle, aunt, cousins, grandmother, grandfather, grandparents,
Week 7	Opposites	big/little, fat/thin, hot/cold, clean/dirty, push/pull, noisy/quiet, heavy/light, wet/dry, happy/sad, empty/full, long/short,
Week 8	Colors	Green, white, red, black, pink, blue, orange, gray, yellow, brown, purple

Appendix G:

Reading Log

Dialogic Reading Log

Book Title	Date	Date	Date	Comments	Initials

Appendix H:

CROWD and PEER (English and Spanish)

CROWD method

1) completion prompts, such as fill-in-the-blank questions (this allows children to complete the sentence for you)

   example: Ask the child to complete a common phrase…the wheels on the bus go _____ and _____.

2) recall prompts, asking children to try to remember specifics about the story (the adult asks the child to recall what has happened in the story)

   example: Ask what the characters do in the story.

3) open-ended prompts, to encourage the children to respond in his own words (used in conjunction with pictures in the book)

   example: Ash the child what is happening in a picture.

4) wh-prompts, using Wh-questions to elicit more information (helps to build the understanding of words and events in the story)

   example: Point to something in the picture and ask the child to name the object or action.

5) distancing prompts which relates the child to the text of the book (encourages the child to link the book to one of their own experiences)

   example: ask questions that relate the book to something in the child's life.

PEER method

The PEER approach is a way to aid the adult readers to remember the interaction sequences:

1) prompts-Invite the child to talk about something on the page.
2) evaluate-Think about what the child says. Is the answer correct? What information can you add?
3) expand-Add a few words to the child's response.
4) repeat- Ask the child to repeat the expanded or correct response.

Método MISMO

1) indicaciones de finalización, como preguntas para completar el espacio en blanco (esto permite que los niños completen la oración por usted)

   ejemplo: Pídale al niño que complete una frase común ... las ruedas del autobús van _____ y _____.

2) recordatorios, pidiéndoles a los niños que intenten recordar detalles sobre la historia (el adulto le pide al niño que recuerde lo que sucedió en la historia)

   ejemplo: pregunte qué hacen los personajes en la historia.

3) indicaciones abiertas, para alentar a los niños a responder con sus propias palabras (utilizadas en conjunto con las imágenes del libro).

   Ejemplo: Desvíe al niño lo que está sucediendo en una imagen.

4) Indicaciones de WH, usando preguntas de Wh para obtener más información (ayuda a desarrollar la comprensión de las palabras y los eventos en la historia)

   ejemplo: señale algo en la imagen y pídale al niño que nombre el objeto o la acción.

5) indicaciones de distanciamiento que relacionan al niño con el texto del libro (lo alienta a vincular el libro a una de sus propias experiencias)

   ejemplo: haga preguntas que relacionen el libro con algo en la vida del niño.

Método PEER

El enfoque PEER es una forma de ayudar a los lectores adultos a recordar las secuencias de interacción:

1) indicaciones: invite al niño a hablar sobre algo en la página.
2) evaluar-pensar en lo que dice el niño. ¿Es correcta la respuesta? ¿Qué información puedes agregar?
3) expandir: agregue algunas palabras a la respuesta del niño.
4) repita: pídale al niño que repita la respuesta expandida o correcta.

Appendix I:

Example of Script for a book (English and Spanish translations)

Food/Comida:

Front cover/Portada: What are the bears doing? Qué hacen los osos? How many bears do you see? Cuántos osos ves? Is it hot or cold? Hace calor o frío? Where are they? Dónde están?
Bread/Pan: The bear is eating bread with honey. El oso come pan con miel. • Where do we find honey? Dónde encontramos la miel? • What do you put on your bread? Qué le pones a tu pan? • Where do you get your bread? A dónde vas a buscar el pan? • We can make a peanut butter and jelly _____. Podemos hacer un_____ de mantequilla de cacahuate y mermelada.
Fruits/Frutas: The bears are playing with the cherries. Los osos juegan con las cerezas. • Can you name all of the fruits in the bowl? Puedes mencionar las frutas que estan en el cuenco/envase? • Where is the banana? Dónde esta el plátano? • What animal likes to eat bananas? A qué animal le gusta comer plátanos? • Where did the bear put the cherries? En dónde puso el oso las cerezas? • What fruits do you eat at your house? Qué frutas comes en tu casa? • One of the bears is lying in the _____. Uno de los osos está acostando en _____.
Egg/ Huevo: The bear is eating his egg out of a cup. El oso come su huevo de la taza. • How many eggs are in the carton? Cuántos huevos hay en la caja? • Eggs come from a ___. Los huevos vienen de _____. • Why does the bear have on a bib? Porqué el oso tiene un babero puesto? • Show me the watermelon. Muéstrame la sandía.
Cheese/Queso: The bear is eating cheese toast. El oso come tostada de queso. • What is toast? Qué es tostada? • How do we make toast? Cómo hacemos tostada? • Cheese tastes really good with _____. El queso sabe bien rico con_____. • We put cheese on our _____. Ponemos queso en nuestro ___. • What animal likes to eat cheese? A qué animal le gusta comer queso?
Ice cream/Helado: The bears are eating ice cream. Los osos están comiendo helado. • Do you think that it is hot or cold outside? Crees que está frío o caluroso afuera? • What flavors of ice cream did they eat? Qué sabores de helado ellos comieron? • When would you eat ice cream? Cuándo comes helado? • Ice cream is not hot, it is __. El helado no es caliente, es ___. • What will the bears do next? Que harán los osos a continuación?

Fruit juice/Jugo de frutas: The bears are drinking juice at a party. Los osos toman jugo en la fiesta.

- Why are they having a party? Porqué ellos tienen fiesta?
- What color is the juice? De qué color es el jugo?
- My favorite juice is _____. Mi jugo favorito es _____.
- What do the bears have on their heads? Qué tienen los osos en la cabeza?
- When did you get a balloon? Cuándo conseguiste un globo?

Cake/Pastel: The mama bear gave the little bears some cake. La mamá osa le dio un poco de pastel a los ositos.

- What kind of cake is this? Qué tipo de pastel es este?
- You eat cake on your _____. Comes pastel en tu _____.
- When do you eat cake? Cuándo comes pastel?
- Why is the mama bear wearing an apron? Porqué la mamá osa esta usando un delantal?
- She cut the cake with a _____. Ella cortó el pastel con un ____.

Chicken/Pollo: The baby bear is eating a chicken leg. El bebé oso está comiendo una pierna de pollo.

_____

- Why is the bear wearing a bib? Porqué el oso usa un delantal?
- What restaurant do you get chicken? En que restaurante consigues pollo?
- The chicken lives on a _____. El pollo vive en _____.

Cookie/Galletita: The bears are sharing a plate of cookies. Los osos comparten un plato de galletitas.

- What shapes are the cookies? Qué formas tienen las galletitas?
- Which bear is the girl? Cuál de los osos es niña?
- The cookies are in the _____. Las galletitas estan en el _____.
- There are crumbs on the floor. Why? Hay migajas en el suelo. Porqué?

Ham/Jamón: The bear is eating a ham sandwich. El oso está comiendo una torta de jamon.

- Where is the bear eating? Dónde come el oso?
- Why does she have on a hat? Porqué ella tiene un sombrero puesto?
- What color is the ham? De qué color es el jamón?
- The food is in a _____. La comida está en una _____.
- Have you ever been on a picnic? Has estado alguna vez en un picnic?
- Picnics are not inside, but _____. Los picnics no son adentro, sino _____.

Milk/Leche: The mama bear is pouring her son some milk. La mamá osa está vertiendo un poco de leche a su hijo.

- Is it daytime or nighttime? How can you tell? Es de día o de noche? Puedes decir?
- What animal gives us milk? Qué animal nos da la leche?
- What kind of clothes does the boy bear have on? Qué tipo de ropa esta usando el niño oso?
- When it is nighttime, we go to _____. Cuando es de noche, vamos a _____.

Appendix J:

Fidelity Checklist

Fidelity Checklist

1. **Book/Reader:**

2. **Reader uses most interaction strategies of PEER (prompt, evaluate, expand, repeat)**
Mark only one oval.

	1	2	3	4	5	
strongly agree	◯	◯	◯	◯	◯	strongly disagree

3. **Reader uses most interaction strategies of CROWD (completion, recall, open-ended, Wh, and distancing)**
Mark only one oval.

	1	2	3	4	5	
strongly agree	◯	◯	◯	◯	◯	strongly disagree

4. **Reader allows sufficient time for children to respond to questions.**
Mark only one oval.

	1	2	3	4	5	
strongly agree	◯	◯	◯	◯	◯	strongly disagree

5. **Reader enhances word awareness through visuals and verbal prompts.**
Mark only one oval.

	1	2	3	4	5	
strongly agree	◯	◯	◯	◯	◯	strongly disagree

6. **Reader calls child's attention to vocabulary words while reading the story aloud.**
Mark only one oval.

	1	2	3	4	5	
strongly agree	◯	◯	◯	◯	◯	strongly disagree

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Appendix K:
Post-Intervention Survey for Parents

Post-intervention survey

1. **These lessons were helpful in teaching specific vocabulary to my child**
Mark only one oval.

	1	2	3	4	5	
Strongly Agree	◯	◯	◯	◯	◯	Strongly Disagree

2. **I will use the instructional tactics used in this study in future literacy activities with my child.**
Mark only one oval.

	1	2	3	4	5	
Strongly Agree	◯	◯	◯	◯	◯	Strongly Disagree

3. **I have seen my child use more Spanish vocabulary since implementing this intervention.**
Mark only one oval.

	1	2	3	4	5	
Strongly Agree	◯	◯	◯	◯	◯	Strongly Disagree

4. **I have seen my child more interested in books since implementing this intervention.**
Mark only one oval.

	1	2	3	4	5	
Strongly Agree	◯	◯	◯	◯	◯	Strongly Disagree

5. **Overall, this was a worthwhile and useful intervention.**
Mark only one oval.

	1	2	3	4	5	
Strongly Agree	◯	◯	◯	◯	◯	Strongly Disagree

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