EVALUATING THE EFFECTS OF THE UNIVERSITY OF FLORIDA LITERACY INITIATIVE (UFLI) ON THE READING SKILLS OF SPANISH-SPEAKING ENGLISH LANGUAGE LEARNERS

By

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To my loving husband Matt, dad Luis Francisco, mom Yolanda and loving family
Thank you for all your love and support
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Many English language learners (ELLs) in schools experience reading difficulties, particularly Spanish-speaking students. This is a serious problem given the tendency for struggling readers to fall further behind as they advance in school. This issue becomes more pressing as the number of ELLs enrolled in schools rises and the availability of native language instruction diminishes. Fortunately, there is evidence that English reading interventions that have proven to be effective for struggling native English speakers are also effective for ELLs with different levels of English oral proficiency. Given that the literature is scarce, it is important to investigate the impact of other reading interventions on the reading outcomes of ELLs.

The purpose of this study was to examine the effectiveness of a modified version of the University of Florida Literacy Initiative tutoring program in promoting the reading skills of second-grade Spanish-speaking ELLs who are struggling to read. The program was modified to include small-group instruction and practices that supported the
language needs of ELLs. A multiple-baseline across groups design was used to examine students’ response to the intervention, as measured by the rate of correct pseudowords (CPPM) and sight words (CSPM) read per minute.

Results showed that all groups improved from baseline to intervention in their rates of CPPM and CSPM and maintained appropriate rates two weeks after the intervention ceased. In addition, all groups showed a marked improvement in book reading accuracy of at least one half’s year progress and up to a year and a half’s progress in a limited number of sessions. Students’ improved reading skills were further corroborated by pre- and post-intervention measures of decoding, word recognition, fluency, and comprehension, as well as teachers’ ratings of students reading abilities and classroom behaviors. After intervention, students also demonstrated more positive attitudes towards reading. Most importantly, the intervention proved effective for all students regardless of their level of English oral proficiency. Social validity measures showed that the UFLI program was regarded as important, effective, and feasible among participants and teachers. These results are consistent with available literature that supports the implementation of early English interventions for ELLs.
CHAPTER 1
INTRODUCTION

Learning to read is an important milestone in every child’s life. Due to its close relationship with academic achievement (Whitehurst & Lonigan, 2002), proficient reading holds lifelong implications. According to Adams (1990), reading “is the key to education, and education is the key to success for both individuals and a democracy” (p. 13). The ability to read not only opens a wealth of professional opportunities for individuals, but also facilitates the completion of basic daily tasks, such as paying bills, reading the newspaper, reading medicine labels, reading instructions, and filling out forms (Anderson, Hiebert, Scott, & Wilkinson, 1985; Chhabra & McCardle, 2004). The recognition of the importance of reading has prompted many initiatives throughout the years with the purpose of better understanding the processes involved in skilled reading, as well as identifying and setting in place effective ways to promote its development (Adams, 1990; Anderson et al., 1985; National Commission on Excellence on Education, 1983; National Reading Panel, 2000; No Child Left Behind, 2001; Snow et al., 1998).

Unfortunately, there are many children in school who struggle with reading. In 2007, the National Center for Education Statistics (NCES) reported that 33% of fourth grade students in public schools scored below basic levels on reading (Lee, Griff, & Donahue, 2007). The percentages across states showed great variance, from 19% in Massachusetts to 66% in the District of Columbia. The report also showed a 27-point gap between Blacks and Whites, and a 26-point gap between Hispanics and Whites. There is also evidence that a gap already exists when children enter kindergarten. For example, the Early Childhood Longitudinal Study examined a group of 19,000
kindergarten students from a representative sample of 940 private and public schools in the nation and found that 18% of students were not familiar with the conventions of print (i.e., directionality of text, book structure), while 34% were unable to name the letters of the alphabet (NCES, 2001). Scarborough (2003) stated that between 65% and 75% of children who experience reading difficulties in the early years continue to show poor reading skills during the course of their school years. These numbers are troublesome, given the tendency for struggling readers to fall further and further behind their higher performing peers (Whitehurst & Lonigan, 2002), a phenomenon identified by Stanovich (1986) as the “Matthew Effect in Reading” (p. 380). That is, children who read well tend to read more, and as a result become better readers. On the other hand, students who struggle with reading tend to read less and, as a consequence, fail to become skilled readers.

**Statement of the Problem**

Children in the United States whose native language is not English are at particular risk for experiencing reading difficulties and falling behind in school (Snow et al., 1998). The growing number of language minority students in the U.S. (Klingner, Artiles, & Barletta, 2006) and the limited availability of bilingual programs (August, 2006; Gomez-Bellenge, Chen, & Schulz, 2008) make this problem even more pressing.

The term “English language learner,” or ELL, has been defined by the National Literacy Panel on Language-Minority Children and Youth (NLP; August, 2006) as “language-minority students who are limited English proficient” (p. 44). Other names used in the literature include (a) limited English proficient (LEP) (IDEA, 2004), (b) English as a second language learners (ESL) (Fitzgerald, 1995), and (c) culturally and linguistically diverse (CLD) (Cartledge, &Gardner, & Ford, 2009). According to Silliman,
Wilkinson, and Brea-Spahn (2004), there are marked differences in achievement between English language learners and those whose first language is English. This is significant given the changing demographics in schools today. According to the NCES (Planty et al., 2009), in 2007, 20% (10.8 million) of children between the ages of 5 and 17 spoke a language other than English at home, marking a 2% increase from the year 2000. Among this group, 25% of children spoke English with difficulty. Furthermore, 75% of children who spoke English with difficulty spoke Spanish as their first language (approximately 2.1 million). This is reflected in Florida, as well, where 78.8% of students who speak English with difficulty speak Spanish.

As the number of ELLs increases in schools, educators face more challenges because many ELLs experience academic failure (Klingner, Artilès, & Barletta, 2006; McCardle, Mele-MacCarthy, Cutting, Leos, & D'Emilio, 2005), performing below level in reading achievement tests (Bravo, Hiebert, & Pearson, 2006). According to the Survey of the States’ Limited English Proficient Students and Available Educational Programs and Services 2000-2001 Summary Report (Kindler, 2002), only 18.7% of ELLs across 41 states scored above state norms on measures of reading comprehension. According to Snow et al. (1998), Hispanic students are twice as likely as non-Hispanic Whites to perform below level on measures of reading. Furthermore, these gaps are observed early on and tend to persist across the years.

In order to help these students catch up to their higher performing peers, schools need to implement effective reading interventions at an early stage (Cartledge et al., 2009; Denton & Mathes, 2003). The existing literature in the field of reading has highlighted the importance of developing effective reading programs that include critical
reading elements, like phonological awareness, phonics, fluency, vocabulary, and comprehension (National Reading Panel, 2000; Snow et al., 1998). In particular, instruction in phonemic awareness and phonics becomes crucial because they play a key role in the early stages of reading development among native speakers of English (Adams, 1990; Ehri, 2004) and English language learners (Ehri & Roberts, 2006; Helman & Burns, 2008). When students begin to read, they need to develop the ability to analyze and manipulate the sounds in speech, as well as to recognize the letter-sound correspondences so that they can effectively decode unfamiliar words in print (Ehri, 2004). Furthermore, students must develop the ability to read words accurately and automatically in order to achieve fluent reading (Stahl, 2004). When students are able to read words automatically, they are able to focus their attention on higher order skills like comprehension (Adams, 1990; LaBerge & Samuels, 1974). This connection between word reading skills and reading comprehension has been well documented in monolingual readers (Gough, 1996; Stanovich, 1990; Vellutino, Scanlon, & Tanzman, 1994) and language minority students (Hoover & Gough, 1990; Lesaux, Koda, Siegel, & Shanahan, 2006).

Recently, the NLP (August & Shanahan, 2006) reported that word reading skills develop in similar ways between native speakers of English and ELLs. Evidence of these similarities came from research studies that compared native speakers and ELLs on different measures of word reading skills, including pseudoword reading (Chiappe, Siegel, & Gottardo, 2002; Chiappe, Siegel, & Wade-Wolley, 2002; Geva et al., 2000; Jackson & Lu, 1992; Limbos & Geva, 2001; Verhoeven, 1990, 2000; Wade-Woolley & Siegel, 1997). For example, Chiappe et al. (2002) found that ELLs and native speakers
of English in kindergarten had similar performance on measures of letter identification and word reading and that by the end of first grade no differences existed on measures of word and pseudoword reading, despite ELL’s initial lower oral language proficiency. In another study, LeSaux and Siegel (2003) found that the variables that accurately identified struggling beginning readers who are native speakers of English, also served to identify struggling ELLs. Since ELLs and native speakers of English learn to read in similar ways (Ehri & Roberts, 2006; Helman, 2009), Ehri’s explanation on how children learn to read can serve as a theoretical foundation on which to build reading interventions. What follows is a description of Ehri’s theory of word reading development, which delineates how children learn to read words by sight (Ehri, 2005b).

**Ehri’s Phases of Word Reading Development**

According to Ehri (2005a), a skilled reader is able to read isolated words and words in text accurately and quickly. There are four ways in which words are read (Ehri & Snowling, 2004): (a) decoding (using grapho-phonemic correspondence to identify unfamiliar words); (b) analogy (recognizing familiar words that have similar spellings to known words), (c) prediction (predicting a word based on text cues like initial letters, surrounding words, pictures, etc.), and (d) sight (automatically recognizing words that have been read before). Developing the ability to read words by sight is advantageous since it allows readers to focus their attention on meaning (Ehri, 2005a). This ability to read words is acquired gradually. According to Ehri and McCormick (1998) readers go through five phases of word reading development, each one characterized by the learner’s “understanding and use of the alphabetic system” (p. 140). These phases are: (a) pre-alphabetic, (b) partial-alphabetic, (c) full-alphabetic, (d) consolidated-alphabetic, and (e) automatic-alphabetic (Ehri & McCormick, 1998).
Pre-Alphabetic Phase

In this phase, learners read words based on “nonalphabetic visual cues” (Ehri & Snowling, 2004) that are unrelated to the sounds in the words. Arbitrary associations are made between visual aspects of the written word and the spoken form of a word, or between the written form and its meaning (Ehri & McCormick, 1998). For example, the child who encounters a stop sign recognizes the red, octagonal shape, and says “stop,” and the child who recognizes the familiar swirl of the Coca Cola logo says “Coke”. Yet, when the visual cues are taken away, the child is unable to read the words. This happens because in this phase children have limited knowledge of the alphabetic system. Therefore, they are unable to make connections between the letters and the sounds in words when they are trying to read (Ehri, 2005b). Since students rely on ineffective reading strategies, they are unable to read connected text (Ehri & Snowling, 2004). According to Ehri and Snowling (2004), this phase is characteristic of children in preschool or kindergarten who have not received reading instruction. Yet, older students with significant reading difficulties might also be reading at a pre-alphabetic level (Ehri & McCormick, 1998).

Partial-Alphabetic Phase

The partial-alphabetic phase or phonetic cue reading Ehri & Wilce (1985) is characterized by the partial knowledge of the alphabetic system. Students possess an incipient knowledge of letters and sounds, and use this knowledge to guess words. At this time, children are unable to use decoding or analogy as reading strategies (Ehri & Snowling, 2004). Furthermore, their phonemic segmenting ability is still developing, so they are unable to identify all the sounds in words (Ehri & Snowling, 2004). Consequently, when they encounter a word, only partial letter-sounds connections are
made (Ehri & McCormick, 1998). For this reason, this phase has also been called “rudimentary alphabetic” (Ehri & Snowling, 2004). Some common reading behaviors characteristic of this phase include (a) writing words using only salient sounds and leaving out middle sounds (Ehri, 2005b), (b) misreading words as other words that have similar letters (i.e., tall for tell), (c) using letter names to spell words (Ehri, 1989), (d) misspelling words that have sounds not included in the names of the letters (i.e., /g/ as in go), and (e) processing only partial grapheme-phoneme connections to learn sight words (i.e., remembering word book by the /b/ and /k/ sounds) (Ehri & Snowling, 2004).

Phonetic cue reading is characteristic of children in kindergarten and first grade, once letters are learned and reading instruction begins (Ehri, 2005b). Yet, as with the pre-alphabetic phase, older students with learning disabilities might also be reading at this level (Cardoso-Martins, Rodrigues, & Ehri, 2003; Ehri & McCormick, 1998). While phonetic cue reading is more reliable than visual cue reading, it is not sufficient for skilled reading (Ehri, 1991, 1998).

**Full-Alphabetic Phase**

The full-alphabetic phase or cipher reading (Gough & Hillinger, 1980) typifies students who have a full working knowledge of the alphabetic system, as well as phonemic segmentation ability. Learners are able to decode new words and learn sight words by using complete grapho-phonemic cues (Ehri & Snowling, 2004). With the ability to represent full sight words in memory, reading words by analogy becomes possible. Initially, word reading is slow and laborious because children are working to segment and blend all the sounds in the word. It seems that readers are “glued to print” (Chall, 1983). Yet, as students have opportunities to practice decoding and learning sight words, their reading becomes more fluent (Ehri & McCormick, 1998). At this time,
the ability to spell words correctly shows a marked improvement. Using their knowledge of the alphabetic system and their ability to identify sounds in words, students are able to spell words more accurately (Ehri, 1997, 2001). Thus, at this point children are acquiring the foundation for skilled reading and writing. However, for this to take place, children need to receive systematic phonemic awareness and phonics instruction (Ehri & Snowling, 2004). Typically, this phase takes place in first grade, when children develop their alphabetic knowledge. According to Ehri and McCormick (1998), once children master cipher reading, they are able to advance into the next phases of development.

**Consolidated-Alphabetic Phase**

The consolidated phase or orthographic phase (Ehri, 1991) initiates during the full alphabetic phase when children use their knowledge of grapheme-phoneme relations to read larger word units (Ehri & Snowling, 2004). As they encounter common letter patterns, readers recognize and store them as consolidated units. These larger units include rimes, syllables, morphemes, and root words (Ehri, 2005b). As children are able to read and store these larger units in memory, they gain accuracy and speed. They are able to remember multi-letter combinations, which helps decode and remember multisyllabic words (Ehri & Snowling, 2004). As children practice reading words in connected text, their word reading becomes automatic, facilitating comprehension (Ehri & McCormick, 1998). Readers in this phase of development are commonly found in second grade, but can also be found in higher grade levels among struggling readers (Ehri & Snowling, 2004).
Automatic Phase

Children who are considered proficient readers are typically in the automatic phase. According to Chall (1983) proficient readers are able to read familiar and unfamiliar words with automaticity and speed. At this point in time, readers have a copious sight vocabulary and multiple reading strategies that help them recognize most words in text and effectively decode uncommon words (Ehri & McCormick, 1998). Readers’ fluent word recognition allows them to allocate their attention on meaning when they are reading connected text.

The Role of Instruction in Promoting Word Reading Development

While Ehri’s phases describe the process in which normally developing students acquire the ability to read, it is important to recognize that not everyone moves through these phases with ease. According to Ehri and McCormick (1998) one reason why struggling readers fail to advance to the next phase is lack of adequate instruction. In general, instruction for children at risk for reading difficulties needs to be explicit, intensive (i.e., more time, smaller instructional groups), and supportive (e.g., scaffolding) (Torgesen, 2002). In addition, intervention needs to be provided in a timely manner to prevent reading difficulties from getting worse (Lonigan, 2006; Stanovich, 1986; Torgesen, 1998). In relation to Spanish-speaking English language learners, there are two factors that researchers have considered when designing effective reading interventions: (a) language of instruction (Vaughn et al., 2006), and (b) level of oral English proficiency (Ehri & Roberts, 2006).

Regarding language of instruction, many researchers believe that ELLs should receive instruction in their native language because it facilitates the acquisition of literacy skills by taking advantage of students’ oral language development (Francis,
Lesaux, & August, 2006). In bilingual programs, students first learn to read in their native language before introducing literacy instruction in English (Tabors & Snow, 2002). According to the NLP (Francis, LeSaux, & August, 2006), supporters of native-language instruction base their claims on evidence that (a) bilingual students can transfer procedural and declarative knowledge from their first language (L1) to their second language (L2), (b) bilingualism does not affect learning in either language, and (c) reading proficiency in children’s native language can predict reading proficiency in the second language. A synthesis of the literature on language of reading instruction conducted by Slavin and Cheung (2005) and Greene (1997) reported positive results for bilingual programs compared to English-only reading programs. It is important to recognize, however, that many ELLs do not have access to native-language instruction due to geographic, political, and economic constraints (Kelly et al., 2008; Goldenberg, 2008). Some reports show that approximately 60% of ELLs in the nation are receiving reading instruction in English (August, 2006; Goldenberg, 2008), while others report that up to 85% are in mainstream classrooms (Schirmer, Casbon, & Twiss, 1996). Furthermore, the percentage of students that have access to Spanish instruction has declined in recent years from 40.1% in 1993 to 20.4% in 2003 (August, 2006).

Fortunately, the NLP (August & Shanahan, 2006) reported that many of the instructional components that are effective for monolingual learners “appear” to be effective for ELLs, and that those who have no access to first-language support can succeed when high-quality instruction is provided in their second language (Snow, 2006).

Regarding level of oral language proficiency, some researchers and educators believe that when students are learning in English, literacy instruction should be delayed
until students develop sufficient English language proficiency (Ehri & Roberts, 2006; Tabors & Snow, 2002). One reason for this view is that students who have limited English proficiency lack the necessary vocabulary to understand the words they read (Helman, 2009), and consequently, are not able to make sense of texts (Peregoy & Boyle, 2005). The problem with this approach is that by the time interventions are implemented, children are already far behind and will need more intensive interventions to catch up to their peers. Fortunately, there is evidence that ELLs who participate in English reading interventions respond positively, despite having limited levels of English oral proficiency (Gunn et al., 2000, 2002, 2005; LeSaux & Siegel, 2003; Quiroga, Lemos-Britton, Mostafapour, Abbott, & Berninger, 2002; Roberts, 2003; Stuart, 1999).

Many of these studies implemented reading programs that had proven to be effective with monolingual struggling readers (i.e., Proactive Reading, Reading Mastery, Corrective Reading, Reading Recovery). In some cases, researchers implemented the programs as they were designed (Gunn et al., 2000, 2002, 2005; Al Otaiba, 2005) and sometimes they modified the original version to include activities and strategies designed to support the language needs of ELLs (Linan-Thompson et al., 2003; Vaughn, Linan-Thompson, Mathes et al., 2006; Vaughn, Mathes et al., 2006; Vaughn, Cirino et al, 2006). In all cases, results showed that students with different levels of oral language proficiency made significant gains on measures of phonological awareness, decoding, oral reading fluency, and passage comprehension. Therefore, there is no compelling reason why literacy instruction needs to be postponed until students develop sufficient oral English proficiency, and there is substantial support for providing early intervention (Ehri and Roberts, 2006; Gunn et al., 2006; Linan-Thompson et al., 2003).
Purpose of the Study

The findings from previous research provide guidance on how to effectively serve Spanish-speaking ELLs who are being instructed in English and who are struggling with reading. Unfortunately, the literature on effective interventions is still scarce (Gunn et al., 2000; Shanahan & Beck, 2006; Snow, 2006). There is a great need to identify other English interventions that have proven to be effective with struggling monolingual students and evaluate how effective they are in promoting the reading skills of developing readers who are ELLs. Therefore, the purpose of this study is to evaluate the effectiveness of a modified version of the University of Florida Literacy Initiative (UFLI) tutoring program with second-grade Spanish-speaking ELLs who are struggling with reading. The effectiveness of the program was examined through a multiple baseline across groups design. The findings from this study will not only contribute to the literature on effective reading interventions, but also provide more options for teachers who are struggling to support ELLs as they teach them to read in English.

In Chapter 2, a critical analysis of the literature on English reading interventions for struggling Spanish-speaking ELLs will be presented. Next, Chapter 3 will provide a detailed description of the methodology used in this study. This is followed by Chapter 4, which provides a detailed description of the results obtained. Finally, a discussion of findings will be addressed in Chapter 5, along with an overview of limitations, implications for future research and implications for practice.
CHAPTER 2
REVIEW OF THE LITERATURE

Developing the ability to read is vital for a child to succeed academically and in life, yet learning to read is not an easy task. Many young learners have difficulties acquiring the skills necessary to read with fluency and to comprehend what they read (Gunn et al., 2000, 2005). English language learners are at particular risk for experiencing reading difficulties (Snow et al., 1998). In recent years, reports have showed that the majority of ELLs have received reading instruction in English (August, 2008; Goldenberg, 2008). Unfortunately, reports also show that this group of students is performing below average on measures of reading achievement (Kindler, 2002). As the number of ELLs in schools across the nation continues to rise, particularly Spanish-speaking ELLs (Genesee, Lindholm-Leary, Saunders, & Christian, 2005; Kindler, 2002), the need to identify effective English reading interventions becomes prominent (Vaughn, Linan-Thompson, et al., 2006). What follows is a critical synthesis of the literature on English reading interventions for Spanish-speaking ELLs who are struggling to read.

The studies selected were identified through an extensive review of three databases: PsycInfo, EBSCO, and Google Scholar. The following key words were used in different combinations: English language learners, Spanish-speaking, bilingual learners, second language learners, reading interventions, supplemental interventions, and early interventions. In addition, a hand search of the latest issues in relevant journals in the field of education was conducted (e.g., Reading Research Quarterly, The Elementary School Journal, Learning Disabilities Research and Practice), as well as a ancestral search using key articles and reports (e.g., August & Shanahan, 2006; Vaughn, Linan-Thompson, et al., 2006). Of the available literature, studies that met the
following criteria were selected: (a) at least 40% of the participants were Hispanic or spoke Spanish as their first language; (b) participants were considered English language learners or limited English proficient; (c) participants were at risk for reading difficulties or performing below level of measures of reading ability; (d) included a supplemental reading intervention separate from the core reading program; (e) instruction was given in English; and (f) the intervention had a strong focus on foundational reading skills (e.g., phonological awareness, phonics, fluency). Only peer reviewed articles were included. A total of 18 studies met the inclusion criteria. The studies selected were grouped by type of intervention: (a) Reading Recovery, (b) Direct Instruction (Core Intervention Model, Proactive Reading, Reading Mastery/Corrective Reading, and Read Well), and (c) other reading interventions (word reading interventions and comprehensive reading interventions).

First, each study is described, addressing the purpose of the researchers, participants, intervention, dependent measures, and results. Each section ends with a summary and analysis of findings from that particular type of interventions. The chapter ends with a general discussion of findings across studies, along with implications for research.

**Reading Recovery**

Reading Recovery (RR) is an intensive early intervention program designed to help first graders who are having difficulties in reading and writing (Shanahan & Barr, 1995), and who have been identified by their teachers as the lowest reading achieving in their classrooms (Neal & Kelly, 1999; Swartz & Klein, 1995). The main goal of this program is to “accelerate” the rate of progress of struggling readers in order to help them catch up to their classmates (Clay, 1993b). The program lasts from 12 to 20
weeks and provides daily, 30-minute individualized lessons. Each lesson covers seven reading and writing activities that are individually designed based on student’s daily progress: (a) rereading of two or more familiar books, (b) independent reading of previous day’s new book while the tutor observes and records miscues, (c) letter identification tasks and/or word work “breaking and making”, (d) writing a story the child has created while listening and recording the sounds in words, (e) reassembling a cut-up story created by the student, (f) introducing a new book, and (g) reading the new book using learned strategies (Center, Whendall, Freeman, Outhred, & McNaught, 1995; Clay, 1993b).

Participants are selected based on two conditions: teacher’s recommendations and results from An Observation Survey of Early Literacy Achievement (lowest 20%; Clay, 1993a). The survey includes six measures related to early reading and writing: (a) letter identification (identify upper and lower case letters), (b) word test (read a list of 20 frequently used words), (c) concepts about print (tasks related to book reading, including directionality, concepts about letters and words), (d) writing vocabulary (write as many words as possible in a ten-minute period), (e) hearing and recording sounds in words (writes a sentence read by the tutor), and (f) text reading level (highest leveled book read with a 90% or higher accuracy) (Clay, 1993a; Swartz & Klein, 1995). Students are discontinued from the program when they show accelerated progress, when their scores on the Observation Survey are within the average range for first grade, and when they demonstrate independent use of strategies, becoming self-sustaining learners (Clay, 1993b; Neal & Kelly, 1999; Shanahan & Barr, 1995). In Reading Recovery, children who receive sixty or more lessons or who are discontinued
with less than 60 lessons are referred to as “program children” (Swartz & Klein, 1995, p. 3).

Reading Recovery was developed by Mary Clay in the mid-70s and adopted nationwide in New Zealand in 1983. Various evaluations in New Zealand provided support for the effectiveness of the program in accelerating students’ progress (Clay, 1985, 1987; Glynn, Crooks, Bethune, Ballard, & Smith, 1989). The program was brought to the United States by researchers at The Ohio State University in 1984, and since its inception, over 1.7 million students have been served around the nation (National Data Evaluation Center [NDEC], 2008). Research conducted by program developers in the United States has found evidence of the effectiveness of the program in helping struggling readers (DeFord, 1995; Pinnell, Lyons, DeFord, Bryk, & Seltzer, 1994; Schwartz, 2005). A recent 3-year independent evaluation of the program conducted by the What Works Clearinghouse (2007) also reported positive effects on alphabetic skills and general reading achievement. This evaluation also reported potentially positive results on fluency and comprehension. According to the NDEC (2008), in the year 2006-2007 almost 100,000 students were served. From these, 73% of the ones who successfully completed the program reached average levels in reading and writing. The rest were referred for further evaluation.

In response to the growing number of English language learners who do not have access to instruction in their native language, some researchers have evaluated the extent to which Reading Recovery produces positive gains when instruction is provided in English. Findings from a study conducted in England showed no significant differences between monolingual English speakers and ELLs on all subtests of the
Observation Survey after participating in RR (Hobsbaum, 1995). In the United States, two studies examined the impact of RR on English language learners (Ashdown & Simic, 2000; Neal & Kelly, 1999). Neal & Kelly (1999) reported data for students receiving RR in English and Descubriendo La Lectura (Spanish version of RR; Escamilla, 1994). Yet, in this review, only data for students participating in English interventions were addressed. What follows is a description of these studies.

Ashdown and Simic (2000) evaluated the effectiveness of Reading Recovery on the reading achievement of struggling first grade native and non-native English speakers, from 37 Reading Recovery sites affiliated with the New York University. Data from a six year period (1992-1998) were obtained from the Reading Recovery Data Sheet of the National Data Evaluation Center. Three types of participants were selected based on their language status: (a) native English speakers, (b) non-native speakers with limited English proficiency - LEP, and (c) fluent non-native speakers – ESL. English proficiency was determined by results from a language proficiency test, when available, or teacher judgment, as reported in the RR national questionnaire (NDEC). These participants were then assigned to one of three groups based on their performance in the Observation Survey of Early Literacy Achievement : (a) RR group (natives = 20,863, LEP = 1814, ESL= 2924), representing the lowest 20% of first graders who received RR intervention; (b) comparison group (natives 8845, LEP = 995, ESL = 1427), representing at risk-students who did not receive intervention; and (c) random sample group (natives = 15,595, LEP = 731, ESL = 2037), representing the top 80% of first graders in Reading Recovery classrooms. All students received core reading instruction in English. The majority of non-native speakers spoke Spanish as their first language.
(54% of LEP and 74% of ESL). Analysis showed that 63% of students in the RR group successfully exited the program. Chi-square analysis found significant differences in success rates among the language groups, pointing out that fluent ESL students had a higher success rate (66.3%) than native speakers (62.2%) and LEP students (61.7%). Further analysis demonstrated that all groups, regardless of language background and English proficiency had equal opportunity to receive the full Reading Recovery program (at least sixty lessons). Nevertheless, non-native speakers (ESL and LEP) were significantly underrepresented in the RR group compared to native-English speakers and this may be a consequence of teacher bias in the selection process. The authors suggest that some educators might delay intervention until non-native speakers develop their English skills or might select students who have higher probabilities of benefitting from the intervention, in this case, native speakers.

To compare the reading achievement at the end of first grade for all groups, an analysis of variance was conducted with language (native, ESL and LEP) and sample group (RR, comparison, or random sample) as fixed factors, and Text Reading Level as the dependent variable. The analysis showed significant interaction between sample and language, with mean differences in the expected direction. The differences between the three language groups varied significantly among the three samples, with native-speakers outperforming the non-native groups. Yet, the differences between language groups in the RR sample were much smaller. The gap between LEP and ESL in the RR sample was narrower than those in the comparison and random sample groups. ESL and LEP students in the RR sample significantly outperformed other ESL and LEP students at risk who did not receive intervention (comparison sample). Furthermore, the
LEP students in RR outperformed the LEPs in the random sample, who were in the higher 80% of their classrooms (random sample). The authors concluded that RR is an effective intervention for native and non-native speakers, independent of their level of English proficiency. Providing intensive, one-on-one intervention in English helped promote the reading outcomes of non-native speakers who did not have access to bilingual programs.

Additional support for the use of RR with ELLs comes from the work of Neal and Kelly (1999). They conducted a study with first grade ELLs receiving Reading Recovery. The study compared data from the years 1993 to 1996 in the state of California. In this review, data are reported for three groups that received instruction in English. For analysis, the authors reported findings for three groups: (a) RR-ELL (n = 3992), comprising English language learners receiving instruction and intervention in English; (b) RR-English (n = 18,787), comprising all English-speaking children participating in RR (including native speakers and ELLs); (c) English random sample (typical first graders instructed in English, but not receiving RR), against which the RR-ELL and the RR-English would be compared. The total number of participants for the random samples was not reported. Groups were compared based on three of the six subtests of the Observation Survey: writing vocabulary, hearing and recording sounds in words, and text reading levels. These three subtests were selected because they were considered valid indicators of children’s growth, with no ceiling effects. Results showed that RR groups made significant gains from pre- to post- measures on the three subtests. Furthermore, students who were discontinued from the programs (reached average reading level compared to their classroom peers) outperformed the random
sample (typical first graders) on all measures, while those who were not discontinued performed below their typically performing peers. It was also estimated that 72% of children in the RR-ELL reached average performance; thus, they were discontinued from the program after an average of 67.69. These findings are comparable to the proportion of students in RR-English (75.2%) who were discontinued after 63.27 lessons on average. The authors concluded that RR was effective in helping at-risk children catch up to typical achieving first grader peers, regardless of language status. In regard to children who were not discontinued, the authors stated that they performed at 8 to 10 text reading levels below children who were discontinued, an indication that they had not developed a system of literacy learning and that they would need more extensive interventions. An interesting finding related to not-discontinued children is that their progress in text reading was slower and that they stalled around a level five, equivalent to a pre-primer 2 level on basal series. This finding points out the need for more intensive interventions (Torgesen et al., 2001). It is interesting to note that the studies that used RR with ELLs did not state making language accommodations, showing that the same intervention that worked for native speakers also worked for ELLs.

In summary, these studies revealed that RR was effective in improving the reading outcomes of struggling first grade, Spanish-speaking ELLs. In particular, students who were successfully discontinued from the program demonstrated average or above average performance compared to their first grade peers. These findings are comparable to the findings of studies that evaluated the effectiveness of RR with native-English speaking children (Clay, 1985; Glynn et al., 1989; Pinnell et al., 1994). Of
particular interest are the positive gains made by English language learners when instructed in English. While many researchers highlight the benefits of using students’ native language during reading instruction (August & Hakuta, 1997; Greene, 1997; Krashen, 1991; Mortensen, 1984), it is certain that many struggling readers do not have access to bilingual education programs (Goldenberg, 2008). These students are in need of effective early interventions that can support their literacy development in English. Reading Recovery can be considered a promising approach for this particular group of children. Notwithstanding, before any concluding statements are made about the effectiveness of RR, more research should be conducted. Particularly, it should address how effective is RR for different language groups and how students’ response to the intervention is impacted by level of English language proficiency. In the two studies that examined RR for ELLs, only Ashdown and Simic’s (2000) reported data on the language composition of the sample. Yet, it did not disaggregate the data for each particular group. On the other hand, they reported that RR helped improve the reading outcomes of students with limited English proficiency as well as fluent English speakers.

Despite the positive outcomes reported for RR, there are some areas of concern regarding the data collection procedures, as well as the research designs. First, the two studies based their main analysis of students’ performance on the Observation Survey (English and Spanish version), which was designed by the developer of the Reading Recovery program. According to Center and Wheldall (1992), the survey may be biased because it focuses on tasks that are explicitly taught in the program, increasing the likelihood that students are identified as successful when they might not have acquired the necessary skills to thrive in the general classroom. Second, studies did not report
data on the long lasting effects of the intervention. There is a need for longitudinal studies that evaluate students’ ability to thrive once they leave the program. Third, none of the studies compared the effectiveness of RR to other individualized tutoring programs that address early reading skills. Thus, we cannot assure that RR is more effective for English language learners than other available programs. Fourth, no study included a control group with random assignment. This is a common criticism against Clay’s research design (Center & Wheldall, 1992). According to Nicholson (1989), by not having random assignment, progress on part of the lowest performing students may not be explained with certainty by participation in RR. It is possible that students who are performing at low levels at pre-test make progress even in the absence of an intervention. Fifth, according to Shanahan and Barr (1995), the empirical evaluations of this program have been limited to a set of unpublished technical reports. While this review did not include technical reports, it is important to note that both studies were published in *Literacy Teaching and Learning*, a journal published by the Reading Recovery Council of North America. This calls attention to the need for independent evaluations of RR for Spanish-speaking English language learners, given its widespread implementation.

**Direct Instruction**

Direct Instruction (DI) is an approach designed to accelerate student learning by the careful control of curriculum and instruction delivery (Engelmann & Engelmann, 2004; Marchand-Martella, Slocum, & Martella, 2004). There are three critical components of this approach: (a) organization of instruction (scheduling and material organization that promotes reading-engaged time); (b) program design (specifying clear objectives, teaching learning strategies, clear instructional formats that specify what
teachers and students will do, providing an optimal sequence of skills, provision of appropriate examples, and opportunities to practice the new skills); and (c) teacher presentation techniques (small group instruction, appropriate pacing, progress monitoring, teaching to mastery, motivation through high levels of student success (Carnine, Silbert, & Kame’enui, 1990; Marchand-Martella et al., 2004). Various programs have been developed following the principles of Direct Instruction: Corrective Reading (Engelmann, Carnine, & Johnson, 1988), Reading Mastery (Engelmann & Bruner, 1988), Proactive Reading or Early Interventions in Reading (Mathes & Torgesen, 2005), Core Intervention Model (Gerber & English, 2003), and Read Well (Sprick, Howard, & Fidanque, 1998). Recently, researchers have evaluated the impact of these programs on the reading outcomes of Spanish-speaking ELLs.

**Core Intervention Model**

The Core Intervention Model (Gerber & English, 2003) is based on principles of Direct Instruction (Carnine, Silbert, & Kame’enui, 1990) and it focuses on the systematic reteaching of phonological skills through an explicit correction process called “correction staircase” (Gerber, Jimenez, Leafstedt, Villaruz, Richards, & English, 2004, p.241). Correction staircase differentiates instruction by breaking down complex tasks into simpler steps and providing a scaffolding sequence of instruction to ensure that students provide the correct answer. Each sequence of instruction starts with a “supply question” (e.g., “What word rhymes with cat?”), where students construct and formulate an answer. If a student is unable to provide an answer or makes a mistake, the instructor takes the student down the “staircase” to a less demanding question. In this case, a “binary choice” question is introduced, where students select from the two options provided (e.g., “What rhymes with cat, calf or bat?”). If the student provides the
right answer, the instructor moves up the staircase and ask the original question, allowing the student to answer it independently. If the student fails to answer the binary question, the next step down is to “model-lead,” where the instructor models and then elicits the right answer (e.g., “Bat rhymes with cat. What word rhymes with cat?”). If the student fails again, instructor moves down to the “model-imitation” step, where students are asked to imitate the correct answer (e.g., “Say bat.”). When students provide the correct answers, the instructor guides them back up the staircase until they answer the “supply question” again. Once students answer the supply question correctly, the instructor either asks a similar supply question to ensure that learning has taken place or moves to a different task (Gerber et al., 2004; Leafstedt, Richards, & Gerber, 2004; Richards, Leafstedt, & Gerber, 2006).

Leafstedt et al. (2004) initially tried the CIM model with a class of Spanish-speaking kindergarten students receiving instruction in English (n=16) and found that students made significant growth in phonological awareness and word reading after 10 weeks of intervention (15-minute sessions, 2 times a week). The instruction incorporated a phonological awareness curriculum, called Early Reading Project, which included developmentally sequenced skills (onset-rime before phonemes) and tasks (identification before manipulation, and manipulation before production). Leafstedt and colleagues found that students across ability levels responded to the CIM model, but that the lowest performing group would have benefited from a longer intervention. While this model was used as a whole class intervention, Richards and colleagues (2006) decided to try the model as a supplemental intervention for Spanish-speaking students identified as struggling readers.
The study conducted by Richards et al. (2006) examined the impact of the CIM model, following the developmental sequence of skills and tasks from the Early Reading Project. They examined the response of four at-risk Spanish-speaking students in kindergarten to a 10-week intervention (15-minute sessions, 2 times a week). Students were identified based on their low scores on the word identification and word attack subtests of the Woodcock Johnson-Achievement (WJ-ACH). Based on a microgenetic methodology, used to analyze the process of change during a specific period of time (Siegler & Crowley, 1991), the authors collected weekly measures for fluency and strategy use. Fluency was examined with the nonsense word fluency and segmentation fluency measures of the Dynamic Indicators of Basic Early Literacy Skills (DIBELS). Strategy use was examined with three phonological awareness tasks (e.g., onset, rime, and segmentation) from La Patera Phonological Awareness Test (LP-PAT; Richards, Leafstedt, Gerber, Jimenez, & Filippini, 2003). Specifically, the instructors asked students a series of questions that allowed them to explain their responses (i.e., How do you know that? What letter do they start with? How many sounds do you hear?). Strategies were coded based on a hypothesized model of strategy development for kindergarten. Strategies were either coded as lower level (e.g., student says words sound the same, they repeat a word, or segment one phoneme) or higher level (e.g., student says individual phonemes sound the same, segments two, three, or four phonemes).

Results showed that, in fluency, 3 out of 4 students (responders) met midyear kindergarten benchmarks on nonword fluency and segmentation fluency. These students seemed to use more strategies from the higher level for all three phonological
tasks. The fourth student progressed at a slower pace, failing to use higher level strategies (i.e., non-responder). Notwithstanding, the difference between the responders and the non responder was in timing, not in strategy development. This means that with more time, the non responder would probably start using higher level strategies.

Variation in response to explicit and systematic interventions has been reported by other researchers (Torgesen, 2000; Wanzek & Vaughn, 2008). This study not only provides additional support for the use of CIM as a promising phonological awareness intervention, but also highlights the importance of studying strategy use as an effective measure of response to intervention. The authors suggest replicating this study for generalization purposes. In replicating, it is important to consider providing longer interventions to allow all students to develop reading strategies.

**Reading Mastery and Corrective Reading**

Reading Mastery is a reading program designed for beginning readers that provides explicit instruction in phonemic awareness, sound-letter correspondence, and decoding (Gunn, Biglan, Smolkowski, & Ary, 2000). Corrective Reading was designed for older students reading below grade level and struggling with basic decoding skills. It addresses reading accuracy (decoding), reading fluency, and reading comprehension (Smith, 2004). Following the principles of DI, both programs group students according to instructional needs, provide ample opportunities to practice, teach students to mastery, and provide frequent teacher modeling and feedback (Gunn et al., 2000). Research has found both programs to be effective in improving the reading outcomes of beginning and struggling readers (Campbell, 1984; Gregory, Hackney, & Gregory, 1982).

Three studies conducted by Gunn and colleagues evaluated the effectiveness of Corrective Reading and Reading Mastery on the reading outcomes of Hispanic
(Spanish-speaking) and non-Hispanic (European American, English-speaking) students at risk for reading difficulties (Gunn, Biglan, Smolkowski, & Ary, 2000; Gunn, Smolkowski, Biglan, & Black, 2002; Gunn, Smolkowski, Biglan, Black, & Blair, 2005). The first study by Gunn and colleagues (2000) included a total of 256 students (158 Hispanics and 98 non-Hispanics) from K to 3rd grade. Students were screened in the spring of the year prior to intervention and were selected based on teachers' rating of aggressive behavior and/or based on below grade level reading performance (158 selected through reading criteria; 98 selected through aggressive/reading criteria). Students were matched and randomly assigned to one of two conditions: (a) Intervention – including struggling beginning readers in first and second grade who received Reading Mastery and struggling third and fourth grade students who received Corrective Reading (73 Hispanics and 50 non-Hispanics); and (b) comparison – including first to fourth grade struggling readers who did not receive intervention (79 Hispanics and 45 Non-Hispanics). The intervention students were tested three times: Time 1, in the fall of the first year (year after screening), before intervention began; Time 2, in the fall of the first year, after 6 to 7 months of intervention; and Time 3, in the fall of the second year, after 9 months of additional intervention.

Students in the intervention condition participated in daily, small group instruction (1-3 members) for 25 to 30 minutes per lesson for 2 years. At the end of the first year of intervention (Time 2), analysis of variance showed that students in the intervention group significantly outperformed the comparison group on measures of word attack (WJ-ACH), but not on word identification (WJ-ACH) or Oral Reading Fluency (Martson, 1989). No significant interaction between ethnicity and instructional condition were
found. Effects due to ethnicity showed that Hispanics performed significantly lower than non-Hispanics on measures of oral reading fluency. At the end of the second year of instruction (Time 3), students in the intervention group significantly outperformed the comparison group on four measures of the WJ-ACH: word attack, word identification, reading vocabulary and passage comprehension. In addition, oral reading fluency approached significance (p<.056). Further analysis showed no significant differences between Hispanics and non-Hispanics on word identification, word attack, fluency, or passage comprehension. Non-Hispanics made greater gains in vocabulary than Hispanics. Additional analysis showed that Hispanics students who started the program with limited English proficiency (n=19) benefitted as much as the rest of Hispanics. Gunn and colleagues analyzed the relationship between decoding, reading fluency, and comprehension. They found that improvement in decoding from Time 1 to Time 3 was associated to improvement in oral reading fluency and passage comprehension. The strongest predictor of comprehension in this study was oral reading fluency.

The authors concluded that Corrective Reading and Reading Mastery were effective in improving the reading skills of Hispanic and non-Hispanic struggling readers, and that supplemental instruction is effective for ELLs regardless of language proficiency. Providing explicit and systematic instruction in alphabetic reading skills improved students' decoding skills, which in turn improved fluent reading, and comprehension. Based on the greater gains made by students at the end of the second year, the authors state that providing longer interventions is necessary to make an impact on the reading skills of struggling readers.
In a follow-up study, Gunn and colleagues (2002) examined the sustaining effects of Corrective Reading and Reading Mastery one year after the intervention had ended (Time 4). From the original 256 students included in the first study, the researchers collected data on 195 students. Analysis of variance showed that students that received the supplemental intervention continued to outperform the comparison group on measures of word attack and oral reading fluency. Based on a significant interaction between condition and ethnicity, further analysis showed that Hispanics made significant gains in word attack, compared to non-Hispanics. While no significant differences were found between conditions in relation to vocabulary and comprehension, the authors stated that the effects approached significance for both. Analysis of the performance of Hispanics with different levels of English language proficiency showed no significant difference between students who spoke English at the onset of the intervention and students who did not. Yet, these results should be approached with caution because of the limited number of student data available related to language proficiency (n=16). The analysis also showed that Hispanics that received intervention made significant gains not only in word attack and oral reading fluency, but also in comprehension.

These results provided additional support for the effectiveness of Reading Mastery and Corrective Reading as effective interventions for struggling readers, Hispanic and non-Hispanic. According to Gunn and colleagues, these findings go against a common belief that providing English language learners with English instruction is harmful. Quite the opposite, interventions that offer direct instruction, modeling, immediate feedback, and practice opportunities are very helpful in supporting their reading skills. In their
concluding remarks, Gunn and colleagues pointed out that while students made significant gains after 2 years of intervention, they continued to perform below grade level. They hypothesize that reducing the duration of each lesson to 30 minutes instead of the recommended 40 to 50 minutes could have had a negative impact on the outcomes.

In 2005, following the same format as the first study, Gunn and colleagues compared once again the effects of the two reading programs on the reading skills of kindergarten through third grade Hispanic and non-Hispanic students at-risk for reading difficulties. This time, they included a larger sample (n= 299; 159 Hispanics and 140 Non-Hispanics) and an extended period of analysis (2 years of intervention and a 2 year follow-up). Students were matched and randomly assigned to one of two groups: (a) intervention (Reading Mastery for first and second graders and Corrective Reading for third and fourth graders) and (b) comparison group (struggling first to fourth graders with no intervention). In this study, the authors conducted an additional assessment, Time 5, which was conducted two years after the intervention had ended.

Results demonstrate that at the end of the intervention, students who received the two reading programs made faster gains in letter-word identification (WJ-ACH) and Oral Reading Fluency than the comparison group. Significant differences between intervention and comparison groups were also found for word attack, reading comprehension, and vocabulary. Two years after the intervention was over, significant differences between conditions were found for letter-word identification, oral reading fluency, and reading comprehension, with vocabulary falling just below the chosen .05 alpha level. The authors found once again that Hispanics benefited from the intervention
as much as non-Hispanics, and that language proficiency did not affect their response to the intervention. Furthermore, the programs continued to produce sustaining effects two years after the intervention had ended. In contrast to the previous study, Gunn and colleagues found that those who participated in the intervention approached national average levels on word identification (42nd percentile) and exceeded national levels on word attack (53rd percentile). Nevertheless, their performance in vocabulary and comprehension continued to lag behind the national standards (18th and 25th percentiles, respectively). To make an impact, the authors suggest that early interventions should emphasize these areas to a greater degree.

All three studies provide support for the use of Reading Mastery and Corrective Reading as supplemental reading interventions for struggling readers that speak English as their second language. The two programs not only improved students’ outcomes at the end of the intervention, but produced sustained effects one and two years after the intervention was over. Gunn and colleagues also made evident the benefit of providing longer interventions to improve the outcomes of students at risk for reading difficulties. In addition, these studies highlight the importance of not delaying reading interventions until second language learners develop their oral English language skills. English language learners can benefit from instruction provided in English that explicitly addresses critical early reading skills, like decoding, reading fluency, and comprehension.

**Proactive Reading**

Proactive Reading or SRA Early Interventions in Reading is a small-group intervention program derived from DI (Carnine, Silbert, & Kame’enui, 1990), designed to help struggling first- and second-grade students become competent readers (Mathes,
Denton, Fletcher, Anthony, Francis, & Schatschneider, 2005). The program has 120 40-minute lessons devised to promote phonemic awareness, phonetic decoding, reading fluency, and comprehension (Jordan, 2006). Participants complete daily lessons (6-10 short activities) in small homogeneous groups. For every activity included, instructors model the new content (very little new content addressed in each lesson), facilitate guided and independent practice, monitor students’ progress, and provide immediate positive and corrective feedback (Mathes et al., 2005). The program has a specific scope and sequence of tasks to promote the gradual acquisition of knowledge and skills (e.g., phonetic elements in isolation before applying them in words, decoding words in isolation before applying them to connected text). Movement from one lesson to the other is dependent on mastery of content (100% accuracy on an activity) by every student in the group (Mathes et al., 2005; Jordan, 2006). A typical lesson addresses five reading components: (a) phonemic awareness: phoneme segmentation, blending, and discrimination (from initial sounds, to final and medial sounds, to consonant blends); (b) letter knowledge: saying and writing letter-sound correspondences (a new letter-sound correspondence introduced every 2 to 3 days); (c) word recognition: sound out regular and irregular, high frequency words (moving from CVC words to more complex, multisyllabic words); (d) connected text fluency: repeated reading of decodable text to improve rate and accuracy (2-3 times; choral, paired, and individual reading); (e) comprehension: before reading activities (prediction, activation of background knowledge, establishing purpose for reading) and after reading activities (story-retell, sequencing, summarizing, story grammar elements; Jordan, 2006; Vaughn, Cirino et al., 2006; Vaughn, Mathes et al., 2006).
Proactive Reading was first examined with monolingual English-speaking students with reading difficulties and was found to improve many critical reading elements. Mathes et al. (2005), for example, found that after two years of intervention, first grade students who received Proactive Reading significantly improved in measures of phonological awareness, word reading accuracy, word reading fluency, word attack, word identification, spelling, and reading fluency. Yet, no significant differences were found in measures of reading comprehension.

Four studies have examined the effects of Proactive Reading on the reading outcomes of Spanish-speaking ELLs. Three studies implemented a modified version of Proactive Reading (Linan-Thompson, Vaughn, Prater, & Cirino, 2006; Vaughn, Mathes et al., 2006; Vaughn, Cirino et al., 2006), and one study implemented Proactive Reading as it was originally designed (A. Otaiba, 2005). Linan-Thompson et al. (2006) and Vaughn, Cirino et al. (2006) also reported data for students receiving Lectura Proactiva (Spanish version of Proactive Reading). For the purpose of this review, only data addressing English interventions will be presented.

The modified version of Proactive Reading had an additional 10-minute component addressing vocabulary and oracy development. According to Pollard-Durodola et al. (2006), the participants in these studies would greatly benefit from this added component due to their limited vocabulary and listening comprehension skills. The vocabulary and oracy component included a five-day cycle of shared book reading and vocabulary review (Hickman, Pollard-Durodola, & Vaughn, 2004). On day 1, students participated in a five-step routine: (1) introduction of a story and three to four Tier 2 vocabulary words; (2) read-aloud of a passage from an informational text or
storybook; (3) rereading of text focusing on vocabulary words; (4) focus on deep understanding of vocabulary knowledge; and (5) summarization. On days 2-4, the instructor reviewed the words and passage from the day before, and introduced a new passage with new target words, following the same format as day one. On day 5, instructors reviewed five words students had difficulty with, reread and processed the whole text (Pollard-Durodola et al., 2006).

In one study, Vaughn, Mathes et al. (2006) examined how effective Proactive Reading (modified version) was in improving the reading outcomes of first-grade Spanish-speaking students experiencing reading difficulties. Proactive Reading was selected to match the students’ language of instruction used in the schools. Participants who scored below the 25th percentile on the letter-word identification subtest of the Woodcock Language Proficiency Battery-Revised (WLPB-R) and failed to read more than one word from a five-word experimental reading list in English and Spanish were selected to participate. Based on their pre-test scores, students were matched and randomly assigned to either a treatment group that received the intervention (n= 22) or a comparison group that did not received the intervention (n = 19).

The lessons had an additional piece: embedded language support activities (3-8) designed to facilitate comprehension of tasks and concepts. These activities, supported by available literature on effective English language learning strategies, included instructional scripts with pictures, use of gestures and facial expressions, explicit instruction of English language use, among others (Gersten & Baker, 2000).

Results showed that after 7 months of intervention (average 96.55 hours of instruction), students in the treatment group significantly outperformed the comparison
group on various English measures, including rapid letter-naming (CTOPP, effect size 0.88), phonological awareness composite (CTOPP, effect size 1.24), letter sound identification (untimed, effect size 1.10), word attack (WLPB-R, effect size 1.09), passage comprehension with cloze procedure (WLPB-R; effect size 1.08), as well as verbal analogies (WLPB-R; effect size 0.77). No significant differences were found in oral reading fluency (DIBELS), picture vocabulary and listening comprehension (WLPB-R). Results for Spanish measures showed significant difference for phonological awareness composite (CTOPP; effect size 0.76), Spanish oral language (WLPB-R, effect size 0.01), word attack (WLPB-R; effect size 0.87), and comprehension (WLPB-R; effect size 0.81), but not for oral reading fluency (DIBELS).

The intervention was effective for Spanish-speaking students learning to read in English. Furthermore, transfer of skills to Spanish was observed as a result of the intervention. It is possible that transfer from English to Spanish is easier because Spanish has a more transparent orthography and because students already posses oral language proficiency. Of particular interest is the fact that students responded to the program despite initial low reading and language proficiency in English and Spanish. This supports the conclusion reached by Gunn et al. (2005) to not delay reading interventions until students develop their oral language skills. Another important finding from this study is the significant gains made in passage comprehension. Many early intervention programs tend to improve foundational skills (word attack and word identification) but tend to have limited impact on comprehension. Comprehension strategies like story retell and the inclusion of the vocabulary and oracy component may
be responsible for the outcomes. Vaughn and colleagues affirmed that more gains are attained when English as second language strategies are used.

In a follow-up study, Linan-Thompson, Vaughn, Prater, and Cirino (2006) examined the number of students from the previous study (Vaughn, Mathes, et al., 2006) who benefited from the intervention provided at the end of 1st grade and who continued to benefit at the end of 2nd grade. Following the Response to Intervention (RTI) model, students who received research-based interventions and made expected gains based on predetermined criteria were identified as “responders” and were expected to continue to thrive when the supplemental intervention was removed. On the other hand, students who at the end of an intervention failed to meet the established criteria or made minimal gains were identified as “non-responders” and were considered to be at-risk for reading difficulties. Responders and nonresponders were identified based on their end-of-year scores on two subtests of the WLPB-R: word attack and passage comprehension. Students who scored above 85 on either measure were considered responders, and those who scored below 85 were considered nonresponders. Data were available for 39 participants at the end of first grade and 29 at the end of second grade.

Results showed that 91% of students met criteria at the end of first grade and 94% met criteria at the end of second grade. No data were available related to the specific subtest in which students met criteria (word attack or passage comprehension, or both). This shows that the interventions were effective for the majority of students and that the gains were sustained one year after the intervention had ended. Linan-Thompson and colleagues also found that many students in the comparison group reached criteria at
the end of first and second grade, even though they did not receive supplemental intervention. Yet, the percentages were not as high as with the treatment groups. For example, only 42% of students met criteria at the end of first grade and 44% at the end of second grade. The authors stated that the participating schools were considered “exemplary” or “recognized” because of the high percentage of students passing the third grade state-level reading exams. Their core reading programs were effectively serving the majority of students. Therefore, it was expected that many students would benefit from core reading instruction itself. The low percentage of student in the comparison group that reached criteria at the end of second grade suggests that students learning in English may need early, intense and sustained interventions.

A word of caution: one of the reasons why this study possibly showed higher percentage of responders is that the measures utilized were untimed. According to Linan-Thompson and colleagues, fluency measures (timed) are some of the hardest to influence through intervention (Torgesen et al., 2001; Vellutino et al., 1996). It is recommended that future research includes timed and untimed measures to see if different results are obtained.

Vaughn, Cirino, et al. (2006) wanted to replicate the findings obtained with the modified versions of Proactive Reading due to the limited research available on effective interventions for English language learners. Following the same methodology and format as the first study (Vaughn, Mathes, et al., 2006), Vaughn and colleagues evaluated the program with a different sample of Spanish-speaking first-grade students. As before, students were selected, matched, and randomly assigned to one of two groups: intervention (n=43) or comparison (n= 48). Students in the intervention group
participated in 50-minute lessons, five days a week, for 7 months (average of 115 sessions).

Results showed that the intervention group significantly outperformed the comparison group on letter-sound identification (untimed; effect size 0.36), phonological awareness composite (CTOPP, effect size 0.38), word attack (WLPB-R, effect size 0.42), word reading efficiency (TOWRE, effect size 0.41), oral reading fluency (DIBELS), and spelling (words spelled correctly from a list of 25 words in an experimental test, effect size 0.35). No significant differences were found for English language related measures, including listening comprehension, passage comprehension, picture vocabulary, and verbal analogies. This might be related to the extremely low English oral language scores that this group had at pre-test.

In sum, the study replicated the positive findings from the first study on many beginning reading skills, particularly in phonological awareness composite. Many significant gains were obtained, even though their level of performance was lower than those in the first study. It is important to note that the modified version of the programs had the vocabulary and oracy component to help students develop their vocabulary and oral language proficiency; yet, none of these were significantly affected at the end of the intervention. Compared to the previous studies, passage comprehension was not significantly different from the comparison group. These mixed results suggest that further research is necessary before making concluding claims about the need for the added component.

While the previous studies focused on the modified version of Proactive Reading, Al Otaiba (2005) evaluated the effectiveness of Proactive Reading as it was designed,
with no added vocabulary or oracy component. Using a case study design, the author studied the language and reading outcomes of eight ELLs (6 Spanish-speaking and 2 Arabic speaking). Of these, three students were in kindergarten (2 Spanish and 1 Arabic), three in first grade (all Spanish), and two in third grade (1 Spanish and 1 Arabic). Students were identified as at high risk based on their limited progress in reading. Students participated in 15 sessions over a period of 10 weeks.

Al Otaiba conducted t-tests on vocabulary (PPVT-R), sound matching (CTOPP), as well as word attack, word identification, and passage comprehension (Woodcock Reading Mastery –R). For the comparisons, raw scores and standard scores were used. Results showed significant gains on raw scores for sound matching, word attack, and passage comprehension, as well as gains in standard scores for word attack. The author reports a standard score gain of .38 on word attack, .18 on word identification, and 0.30 on passage comprehension for each session. The response to intervention was not affected by the students’ English language proficiency. The author observed variation in the responses, where some made sharp gains, while others made slower progress. All of this was obtained in just 15 lessons, compared to the previous studies that lasted 7 months and had an average of 115 lessons. This investigation provided initial support for the use of Proactive Reading in its original version as a supplemental program for struggling English language learners.

In summary, the studies described support for Proactive Reading as a promising intervention for struggling Spanish-speaking English language learners. Many basic reading skills were positively impacted by the intervention, particularly phonological awareness, word attack, word reading efficiency, letter-sound identification. Initially,
Vaughn, Mathes, et al. (2006) attributed the positive comprehension outcomes to the added vocabulary and oracy component. These findings were contrary to what Mathes et al. (2005) found for monolingual English-speakers. Notwithstanding, the studies with English language learners did not include a condition where the original and the modified version of the program were compared. Therefore, the improvement in comprehension cannot be solely attributed to the added component. This is of relevance, since the replication study by Vaughn, Cirino et al. (2006) did not find significant differences in passage comprehension for either program. Moreover, the added component, with its emphasis on vocabulary development, failed to produce significant gains in picture vocabulary. These results suggest the need for further research, including various comparisons to determine what elements of the program have a greater impact on oral and reading outcomes, and what elements need to be intensified. For example, the authors suggested focusing on fluency, which is critical for future academic achievement.

**Read Well**

Read Well (Sprick, Howard, & Fidanque, 1998) is a reading program for beginning readers in kindergarten and in first grade, as well as for struggling readers in need of remediation (Wahl, 2007). The program provides small group instruction focusing on the explicit and systematic teaching of English decoding, as well as sustained practice in reading of decodable texts, discussion of vocabulary, and concepts in the text (Denton, Anthony, Parker, & Hasbrouck, 2004). Each lesson typically lasts 30 minutes (15 minutes on decoding and 15 minutes on story reading). Lessons are organized by units that are thematically based. Each lesson starts with a new letter sound, which is related to the words in decoding activities, which, in turn, are related to the stories read. In each
lesson, students read connected text, where sounds that have been previously learned are practiced. One particular characteristic of this program is the type of texts that are read: duet stories and solo stories. In duet stories, texts have decodable segments for the students, as well as more advanced segments for the teacher. The solo stories include fully decodable texts that are read by the students (Wahl, 2007). A study conducted by Jitendra et al. (2004) evaluated the effectiveness of Read Well with diverse learners (e.g., learning disabilities, attention-deficit disorder, second-language learner) and found positive effects on reading, spelling, and comprehension for most students. Two studies have evaluated its effectiveness as a supplemental intervention program for struggling ELLs (Denton et al., 2004; Santoro, Jitendra, Starosta, & Sacks, 2006).

The first study conducted by Denton et al. (2004) examined the effectiveness of two tutoring programs, Read Well and a revised version of Read Naturally (Hasbrouck, Inhot, & Rogers, 1999), on the reading achievement of Spanish-speaking bilingual students. A total of 93 students from second to fifth grade with similar reading performance were selected based on the schools’ standardized tests and teachers’ recommendations. To be included, students had to show adequate oral English proficiency and basic reading proficiency in their native language as measured by the Language Assessment Scales – Oral in English and Spanish, as well as the Language Assessment Scales – Reading and Writing. Students were then assigned to one of two programs based on their performance on the word attack subtest of the Woodcock Reading Mastery- R. Those who scored below grade one (e.g. students in need of decoding instruction) were assigned to Read Well, and those who scored equal or
above grade one (e.g. students with established decoding but needing practice in fluency and comprehension) were assigned to Read Naturally. Within each program, students were matched and randomly assigned to one of two conditions: treatment (Read Well = 19; Read Naturally = 32) or comparison group (not receiving intervention; Read Well = 14; Read Naturally = 28). Read Well and Read Naturally were not compared with each other, just with their comparison groups. Students in the treatment conditions participated in small group (1-4 members), 40-minute sessions, 3 times a week, for 10 weeks (average of 22 sessions). To address the specific needs of Spanish-speaking students, the Read Well program focused on the differences between Spanish and English language in their activities. The Read Naturally program modified the lesson to include vocabulary instruction (discussion of meaning for two words in each passage), decoding (teaching one high frequency word per passage and teaching of unknown words), and comprehension (through discussion).

At the end of 10 weeks, Denton and colleagues compared students’ outcomes on three subtests of the Woodcock Reading Mastery Test-Revised (WRMT-R): word attack, word identification, and passage comprehension. They found significant differences between Read Well treatment and comparison groups only on word identification (WRMT-R), which showed the impact that a small amount of explicit English phonics instruction can have on struggling English language learners, particularly when attention is called to the differences between their first and second language. On the Read Naturally condition, no significant differences were found between treatment and comparison groups on any of the subtests. The authors speculated that in the Read Well condition, students did not have sufficient time to
develop the reading automaticity needed to affect comprehension. They also suggested that the lack of systematic vocabulary teaching might have hindered their ability to comprehend what they were reading. Thus, they recommended providing longer interventions and including a systematic vocabulary component when working with English language learners. In relation to the comprehension outcomes of the Read Naturally condition, Denton and colleagues also suggested the need for systematic vocabulary instruction. In addition, they stated that increased fluency could have had an adverse effect on English language learners, who might have needed additional time to process what they were read in English. Notwithstanding, they did not provide any evidence to support this claim. Little research has been conducted on the fluency skills of English language learners (Antunez, 2002), but available data on the fluency skills of struggling readers have demonstrated that improved fluency is related to improved comprehension (Samuels, 1979). Most of the studies dealing with the comprehension skills of English language learners point to the critical role of vocabulary (August, Carlo, Dressler, & Snow, 2005; Carlo et al., 2004; Gersten & Baker, 2000). Therefore, investigating the effect of word reading skills on fluency outcomes should be addressed in future studies.

The second study, conducted by Santoro, Jitendra, Starosta, and Sacks (2006), examined the impact of Read Well on the reading skills of second-grade English language learners, two of which were Hispanic and spoke Spanish as their native language. Using a multiple probe across participants design, Santoro and colleagues were able to make evident the functional relationship between the intervention and the reading outcomes. The length of intervention varied for each participant. As specified in
the program, each lesson lasted an average of 30 minutes and was provided individually by a trained tutor.

Results demonstrated that the positive effect of Read Well was replicated across participants. The Test of Oral Reading Fluency (Martson, 1989) was used to report the number of correct words per minute read in a grade-level passage. All students’ reading rate increased from baseline to intervention to follow up (2 weeks later). Lourdes, a Spanish-speaking student, completed 14 units in 14 weeks. She went from 36 cwpm at baseline to 61 at intervention, to 79 at follow up. Juan, the other Spanish-speaking student, completed 5 units in 7 weeks. He went from 2 cwpm at baseline, to 10 at intervention, to 21 at follow up. Despite the fact that both started at different levels, Read Well supported the development of fluency skills in both students. Similar patterns of improvement were reported for phoneme segmentation fluency, letter naming fluency, letter sound fluency, and non word fluency (DIBELS). Pre- to post-test measures of word attack (WRMT-R) showed gains for Lourdes (from 71 to 84) and Juan (39 to 53). Yet, measures of Word Identification (WRMT-R) did not show improvement from either student. This showed that while Read Well was effective in supporting students’ ability to decode (Word Attack), it was not sufficient to impact students’ ability to read real words. In the passage comprehension subtest of the WRMT-R, Lourdes went from 95 to 103, while Juan went down from 53 to 48. This can be attributed to Juan’s difficulties with reading fluency. The passage comprehension requires the child to read a short passage and identify a key word that is missing from the passage. Thus, Juan might not have reached the level of automaticity necessary to understand the passages and select an appropriate answer. The authors suggested that the vocabulary
and comprehension components of the program did not provide connections to students’ background and personal interests, and that this might have negatively impacted some of the outcomes.

The studies presented showed mixed results about the effectiveness of Read Well on the reading performance of Spanish-speaking English language learners. While Denton and colleagues (2004) found that only the word identification skills of students receiving Read Well were significantly higher than those in a comparison group, Santoro and colleagues (2006) found that the two Spanish-speaking students improved in oral reading fluency, non word fluency, phoneme segmentation fluency, letter naming fluency, letter-sound fluency and word attack, except for word identification. Denton and colleagues stated that the short duration of their intervention may have limited the impact of the program. Probably, with longer interventions, researchers can more effectively measure the effectiveness of Read Well. In regard to comprehension, Denton and colleagues, as well as Santoro and colleagues agreed that including systematic teaching of vocabulary can improve the comprehension outcomes of English language learners. More research is needed to evaluate the value of this program.

**Multiple Direct Instruction Interventions**

A study by Kamps, et al (2007) compared the effect of three Direct Instruction interventions (Read Well, Reading Mastery and Early Interventions in Reading or Proactive Reading) with an English as a second language/balanced literacy intervention. The curriculums targeted phonemic awareness, letter sound recognition, decoding, fluency and comprehension through explicit instruction, repeated practice, and small group instruction (3-6 students). The ESL/balanced intervention focused on word study, group and individual reading, and writing activities through small group
instruction (5-12 students). A total of 230 first and second grade students receiving supplemental interventions participated in the study. Two groups were formed for comparison purposes: a) experimental group (n=117, 84 ELLs and 33 English speakers), representing at-risk students receiving one of the three supplemental programs mentioned above; and b) comparison group (n=113, 60 ELLs and 53 English speakers), representing at-risk students participating in the English as a Second Language- ESL/balanced literacy approach. The majority of ELLs in the sample were Spanish speaking (58%), with the rest speaking Somalian, Sudanese, or Vietnamese. The authors did not report the total number of sessions that students participated in each of the programs, but reported pre-test data from the fall semester and post-test data from the spring semester. Analysis of students’ performance showed greater gains for students participating in the direct instruction interventions. Specifically, an analysis of variance repeated-measures test showed that on nonword fluency (NWF; DIBELS), there were significant differences between experimental and comparison groups (in favor of experimental), but not between English-speakers and ELLs. This means that ELLs and English-speakers responded similarly to direct instruction interventions. In Oral Reading Fluency (DIBELS), there were significant differences between experimental and comparison group, as well as between English-speakers and ELLs. Pairwise comparisons showed that the differences were between English-speakers and ELLs in the comparison group, and not in the experimental group. This finding further supports the positive effect of direct interventions on both language groups. Additional analysis (ANOVA) focusing solely on ELLs found significant differences between experimental and comparison groups. Specifically, those in the direct instruction
condition showed larger gains from pre- to post-interventions in first grade on NWF (effect size .879) and second grade on ORF (effect size .947). Similar findings were reported for three subtests of the Woodcock Reading Mastery Test (word attack, word identification, and passage comprehension). At the end of first grade, students in direct instruction interventions showed larger gains in word attack (effect size 1.78), word identification (effect size 1.54), and passage comprehension (effect size 1.04). At the end of second grade, they obtained larger gains in word identification (effect size 1.39) and passage comprehension (effect size 1.35). The authors also report that ELLs participating in direct instruction interventions demonstrated a faster rate of growth than those in ESL/Balanced approach in the first grade. This difference was no longer significant in second grade, but the authors state that 16 out of 19 students in the ESL/balanced approach had received direct instruction in first grade, thus improving their performance in second grade.

Kamps and colleagues concluded that providing supplemental, small group instruction is important for at-risk English language learners; and that programs like Read Well, Reading Mastery, and Early Interventions in Reading are effective first grade interventions. The authors suggested that students who participated in the ESL/balanced intervention did not make significant progress due to the lack of systematic phonemic and phonics instruction. They also speculate that the large group size had a negative impact on their performance.

Other Reading Interventions

This section addresses studies that focused on specific reading interventions, but that were not identified as following the Direct Instruction approach. The section is
divided in two sections. The first section addresses word reading interventions, and the second section addresses comprehensive reading interventions.

**Word Reading Interventions**

Word reading skills play a key role in beginning reading. According to Ehri and Snowling (2004), the ability to read words with accuracy in isolation or in context is crucial for skillful reading. Struggling readers take longer time to read words and make more mistakes because they have difficulty making phoneme-grapheme connections (Ehri, 2004). To be able to read words accurately and fluently, readers need to develop phonological awareness and decoding skills (Gunn et al., 2005). The following study evaluates a reading intervention that focuses on word reading skills at the word and text level.

Quiroga, Lemos-Britton, Mostafapour, Abbott, and Berninger (2002) examined whether an English intervention addressing phonological awareness, phonics, and fluency improved the reading outcomes of Spanish-speaking first-grade students learning to read in English. Participants were identified based on their low scores (2 standard deviations below the mean) on the word attack and word identification subtests of the Woodcock Reading Mastery Test-R (WRMT-R). Each student received a total of 12 individual sessions over a 6-week period (30-minute sessions, 2 times a week). Each lesson included phonological awareness activities in English and Spanish, as well as reading instruction at the subword, word, and text level. At the beginning of each session, students completed a short phonological awareness lesson from the Spanish Phonological Awareness Training Program (Lemos-Britton & Mostafapour, 1997). In the first six sessions, instruction focused on syllable segmentation, and on the last six sessions, on phoneme segmentation. Next, they participated in English “sound
games” where students counted syllables and phonemes in words selected from the text to be read later on the session. After that, students learned English phoneme-grapheme correspondences from the Talking Letters Program. Using a set of 92 correspondences cards (summary of the spelling unit together with pictured words that contain the spelling units), students were exposed to the spelling units four times in the course of the intervention. Next, students practiced the learned phoneme-grapheme correspondences in single words and connected text through repeated readings. Throughout the lessons, instructors monitored for comprehension by asking students what they liked about the text or by predicting what would happen next. However, this was not an area of focus for the intervention.

At the end of the intervention, the group made significant gains in word identification, but not in word attack. Individual scores showed that all participants improved their real word reading skills, while only six improved pseudoword reading skills. Furthermore, their performance in word reading at the end of the intervention was considered low average, which is more than expected based on their low levels of oral language proficiency. Thus, the provision of an empirically-sound intervention that addressed phonological awareness in both languages, phoneme-grapheme correspondences in English, and repeated reading of connected text was effective in improving the reading outcomes of Spanish-speaking students who performed way below their peers. The authors stated that reading interventions should not be delayed because of limited language proficiency. On the contrary, students should learn to read while they continue to develop oral proficiency. Additional support for this intervention is
needed, particularly studies that include fluency measures to see if the skills targeted also promote fluent reading.

**Comprehensive Reading Interventions**

Following recommendations from the NRP (2000) and the NLP (August & Shanahan, 2006), the next four studies included reading interventions that incorporated comprehension instruction in addition to word reading skills. The studies also examined the effect of increasing the intensity of the intervention. Some studies reduced the group size, while others increased the amount of intervention.

Vaughn, Linan-Thompson, Kouzekanani et al. (2003) evaluated the effectiveness of an English intervention on the reading outcomes of struggling second-grade English language learners. A total of 77 students (39 monolingual English speakers, MES; 38 English language learners, ELL) were assigned to one of three groups: (a) 1:1 (15 ELLs and 12 MES), who received one-on-one intervention; (b) 1:3 (15 ELLs and 14 MES), who received instruction in groups of 3; and 1:10 (8 ELLs and 13 MES), who received intervention in groups of 10. Participants were originally selected based on teacher’s observations of failed reading or students’ low performance on the second-grade state-level Texas Primary Reading Inventory (TPRI). The ELL group included all Hispanic students, while the MES group included 17 African Americans, 3 Whites, and 19 Hispanics who spoke English as the primary language.

The students participated in a total of 58 sessions over a 13-week period (30 minutes, 5 times a week). Each session included five components: (a) fluent reading (6 minutes), through repeated reading of familiar text in pairs and individually; (b) phonological awareness (6 minutes), oral activities focusing mainly on phonemic awareness selected from Ladders to Literacy (O’Connor, Notary-Syverson, & Vadasy,
and Phonemic Awareness in Young Children: A Classroom Curriculum (Adams, Foorman, Lundberg, & Beeler, 1998); (c) instructional-level reading (10 minutes), including reading of a new book while teacher provided support in decoding and modeled comprehension strategies through think-alouds, while students provided the main idea or a summary of the text at the end of the reading; (d) word study (6 minutes), including explicit instruction in phoneme-grapheme correspondences and word patterns, as well as a 1-minute writing activity where students had to write as many words as they could with an opportunity to correct their approximations afterwards; and (e) progress monitoring (20 minutes weekly) through letter naming, phoneme segmentation and nonsense word probes from DIBELS, as well as connected text reading from Read Naturally.

Results showed that all groups made significant gains in passage comprehension (WRMT-R), phoneme segmentation (DIBELS), and fluency (Test of Oral Reading Fluency) from post-test to follow-up (4 weeks later). Furthermore, in comprehension, groups of 1:1 and groups of 1:3 outperformed groups of 1:10. No significant differences were found between groups of 1 and groups of 3. On phoneme segmentation (DIBELS) and reading fluency (Test of Reading Fluency), results were somewhat different. For example, students who were in groups of 1:1 significantly outperform groups of 1:10. No significant differences were found between groups of 1:1 and groups of 1:3, and between groups of 1:3 and groups of 1:10. Vaughn and colleagues observed that 1:1 grouping was superior to 1:10 grouping in phoneme segmentation and comprehension for MES and ELLs. In fluency, MES performed better in groups of 1:1 than 1:10, while ELLs performed better on groups of 1:3 than groups of 1:10. Overall, groups of 1:1 did
not outperform the groups of 1:3 on any measure, showing that both sizes were effective for this particular intervention. This finding is relevant because many schools have limited resources, so small group (group of 3) can be chosen over one-one-one instruction as a way to effectively serve larger number of students. Vaughn and colleagues also stated that English language learners benefited from these explicit and intensive intervention as much as monolingual English speakers, and that this finding is noteworthy due to the high number of ELLs who are struggling to read. Yet, one limitation identified by the authors was the lack of a comparison group that would have included struggling readers who did not receive the intervention. Without this comparison, the association between student gains and the program itself is somewhat limited. Further research is recommended in which the different components of the program are evaluated to see which ones make a bigger impact.

A second analysis based on the same cohort included in the previous study was conducted by Linan-Thompson, Vaughn, Hickman-Davis, and Kouzakanani (2003). This analysis included data for 26 English language learners. These data were disaggregated and further examined, including two follow-ups (4 weeks and 4 months). The purpose was to determine the effectiveness of small group intervention (1-3 students) over time. As mentioned previously, students participated in a total of 58 sessions over a 13-week period (30 minutes, 5 days a week). The authors affirmed that many accommodations were made for English language learners, including the use of picture cards to exemplify the meaning of unknown words, identification of real and nonsense words, provision of quick definitions of unfamiliar words, activation of prior knowledge, opportunities to practice oral skills during instructional level reading,
compare/contrast of Spanish and English phonemes and word patterns, and ample opportunities for practice.

Based on a series of analyses of variance (ANOVA) results showed that students made significant gains from pre- to post-test on word attack (WRMT-R), passage comprehension (WRMT-R), phoneme segmentation (DIBELS), and fluency (TORF), with fluency showing the greatest gains. Gains were sustained four weeks later on passage comprehension and phoneme segmentation, but not on word attack or fluency. From follow-up 1 (4 weeks) to follow-up 2 (4 months over the summer) students maintained their gains on word attack passage comprehension, but only fluency increased significantly. In addition, it was observed that students responded to the intervention regardless of their level of English oral proficiency. These findings provide support for small group interventions that focus on the critical components of reading and that make accommodations for English language learners. Of particular interest are students' significant improvement in fluency and comprehension. Research has shown that comprehension is closely related to fluent reading (LaBerge & Samuels, 1974). Thus, it can be implied that students improved fluency at the end of the intervention facilitated their performance in passage comprehension.

Another study, conducted by Vaughn, Linan-Thompson, and Hickman (2003), examined the same reading program described above with a new sample of second-grade students. In addition, they altered the duration of the intervention to accommodate the needs of students who failed to respond (increments of 10 weeks). A total of 45 students (35 Hispanics, 6 Whites, and 4 African Americans) participated in the intervention. They were identified based on their low performance in the screening
portion of the TPRI (five or less words read correctly out of 8 possible words). All students started the intervention in groups of three. After 10 weeks of intervention, students were assessed to determine response to intervention based on pre-established exit criteria: (a) five or more words read correctly from the screening portion of the TPRI, (b) above 55 correct words per minute (cwpm) on second-grade passage from the Test of Reading Fluency (TORF), and (c) 50 cwpm on three consecutive measures of second-grade fluency from Read Naturally. At the end of 10 weeks, 10 students met criteria (early exit) and exited the program. Students who did not meet criteria (n=35) were regrouped and received 10 more weeks of intervention. At the end of the next 10 weeks, 14 students exited the program (mid exit) and 21 regrouped and received 10 additional weeks with a modified version of the program. The modified version was designed to meet the individual needs of the students, including more assessment of basic skills, more time on word study and fluency, and less work on phonological awareness. The researchers based these changes on observed improvement in phonological awareness and increased need for word attack skills. At the end of the next 10 weeks, 10 students exited the program (late exit), while the 11 who failed to meet criteria (no exit) were referred for further evaluation.

Assessment took place in two ways: (1) pre- and post-test (after 30 weeks) measures using the WRMT-R (word attack and passage comprehension) and the CTOPP (composite score for phonological awareness and rapid naming), and (2) four measures of the TORF (before intervention and after each of the three 10-week periods). Results for the TORF showed that all students made significant gains from pre- to post-test (30 weeks). Effect sizes reported for all groups were large: 3.18 for
early exit group, 2.84 for mid exit group, and 6.06 for late exit. The no-exit group made significant gains (effect size 2.66) despite not meeting exit criteria. A closer look at student data showed that the no exit group started at a much lower place in fluency compared to the early-exit group (10.55 and 32.50 mean score, respectively). This meant that progress was observed even in the no-exit group, but based on the exit criteria established, students were identified as unresponsive. Fuchs and Fuchs (2007) recommend that a child be identified as “unresponsive” when they fail to make adequate progress and when they score below the norm at the end of the intervention or fail to meet a stipulated benchmark.

Results also showed that all groups made significant gains at the end of 30 weeks in word attack, passage comprehension, phonological awareness, and rapid naming with effect sizes ranging from 0.47 to 2.22. This showed that the intervention was as effective for English language learners (Hispanics) as for English language speakers (Whites and African Americans). In fact, Vaughn and colleagues report that all ELLs exited the program (6 in early exit, 6 in mid exit, and 3 in late exit). A closer look at language proficiency showed that students from the early-exit group were more proficient in English than those from mid and late exit and that might have facilitated their learning. Notwithstanding, these findings show that even students with low oral language proficiency can benefit from the program; they might just need more time. The findings from this study are of vital importance to the field of reading, particularly with the amount of students who continue to fail despite intensive interventions (Torgesen et al., 2001). It seems that increasing the intensity by providing longer interventions is an effective way of supporting struggling readers.
Wanzek and Vaughn (2008) evaluated the effects of a similar reading program, focusing on word reading skills, as well as comprehension. They also examined whether increasing the amount of intervention had an impact on students who had been identified as “low responders.” This investigation was conducted over two years and focused on first grade struggling readers who had already failed to meet exit criteria at the end of a 13-week program. The exit criteria established for the original intervention was set at more than 30 correct sounds per minute on the nonsense word fluency and more than 20 words per minute on oral reading fluency subtests form DIBELS. The first year (Study 1) had a total of 50 students (21 from the intervention group and 29 from the comparison group – no intervention) and the second year (Study 2) had a total of 30 students (14 from the intervention group and 22 from the comparison group). The majority of students in the samples were Hispanics (36 in year 1 and 23 in year 2). In each study, students who were selected from the intervention group remained in the intervention group, and students selected from the comparison group remained in the comparison group.

In study 1, the intervention group received an additional 13 weeks of instruction with one 30-minute lessons a day (single dose), five days a week. In study 2, the intervention group received 13 weeks of intervention with two 30-minute lessons a day, five days a week (double dose). Each lesson included the following components: (a) phonics and word recognition (15 minutes), where students practiced letter names, letter sounds, spelling of regular and irregular words, word family patterns, and word building activities; (b) fluency (5 minutes), where students participated in fluency activities at the subword, word, and text level; and (c) passage reading and reading
comprehension (10 minutes), where students read short passages that included the patterns learned previously and responded comprehension questions.

Results for study 1 showed no significant differences between intervention and comparison group on all pre-test measures (oral reading fluency from DIBELS, and word attack, word identification, and passage comprehension from WRMT-R), except for nonword fluency from DIBELS (in favor of treatment group). At post test, no significant differences were found on any measure between intervention and comparison group. Furthermore, all students scored below first grade end-of-year benchmark for oral reading fluency set at 40 correct words per minute. This finding demonstrated that the additional dose of the program was not sufficient for this group of low responding students.

Results for study 2 showed no significant differences between groups on all pre-test measures. At post-test, significant differences were found only for word attack, but data revealed that more students in the treatment group made gains on word attack, word identification and comprehension. Yet, all students in the treatment group continued to score below grade level on end-of-year oral reading fluency (40 cwpm), even though 50% of the students increased their fluency by 10 cwpm. Wanzek and Vaughn (2008) concluded that the additional doses of intervention did not seem to effectively support the reading skills of low responders, and suggested that low responders might need a smaller group size, more intense instructional routines, or a different intervention. The last suggestion is a very important point, since the intervention was not compared against other programs that might benefit low responders when given in varying amounts of time.
In summary, comprehensive interventions that include word reading instruction as well as comprehension instruction proved to be effective for many struggling English language learners, except for the program implemented by Wanzek and Vaughn (2008). Notwithstanding, the limited response might be associated to the sample itself. Wanzek and Vaughn stated that in a response to intervention model, these students would be identified and considered for special education. In addition, the studies reported provided mixed results about the use of more intensive interventions with Spanish-speaking students through smaller group size or increased intervention time. For example, Vaughn et al. (2003) found that small group interventions (1:1 and 1:3) were more effective than large group interventions (1:10), and Linan-Thompson et al. (2003) found positive effects of small group intervention when data were disaggregated for English language learners. On the other hand, provision of extended intervention proved very effective for students in the study conducted by Vaughn, Linan-Thompson and Hickman (2003), but not for students in Wanzek and Vaughn’s (2008) study. This variation in results is consistent with previous findings (Berninger et al., 2002; McMaster et al., 2005; Vellutino et al., 1996) and only highlights the need for further research. In particular, these studies should be replicated using a comparison group receiving a different intervention program in order to determine whether or not the lack of response of some students is due to the intervention itself.

Discussion

The review of the literature included 18 studies of reading interventions for Spanish-speaking ELLs learning to read in English. Overall, these studies showed that Spanish-speaking ELLs who are struggling to read in English can benefit from English reading interventions that address word reading skills. The following discussion
addresses (a) instruction in word reading skills, (b) language and reading instruction, (c) strategies for English language learners, and (d) implications for research.

**Instruction in Word Reading Skills**

While the ultimate goal of reading is comprehension, research has highlighted the important role of word reading skills in beginning reading, specifically phonological awareness, decoding, and word reading fluency (Ehri & Snowling, 2004; Stanovich, 1990; Wagner, Torgesen, & Rashotte, 1994). Fluent word recognition is closely related to reading comprehension (Fuchs & Deno, 1992; Stanovich, 1990) because it allows readers to allocate resources to higher order skills (LaBerge & Samuels, 1974). Conversely, when word reading is slow and laborious, readers expend cognitive resources on decoding instead of deriving meaning from text (Ehri & Snowling, 2004; Gunn et al., 2000; LaBerge & Samuels, 1974). This is true for native English speakers as well as ELLs, both of which learn to read in similar ways (Lindsey, Manis, & Bailey, 2003).

In addition to word reading skills, the NRP (2000) also suggests that any comprehensive reading program needs to address vocabulary development and reading comprehension. In this review, most intervention programs focused to a greater degree on word reading skills (e.g., phonological awareness, phonics, and fluency). The emphasis on vocabulary and comprehension instruction varied across studies, with some briefly addressing them in each lesson (Denton et al., 2004; Santoro et al., 2006), while others dedicating a significant amount of time to them in each lesson (Vaguhn, Linan-Thompson, & Hickman, 2003; Vaughn, Linan-Thompson, et al., 2006; Vaughn, Linan-Thompson, Kouzekanani, et al., 2003; Vaughn, Mathes, et al., 2006; Vaughn, Cirino, et al., 2006; ). Findings from these studies showed that an emphasis on word...
reading skills produced a positive effect in the reading outcomes of Spanish-speaking struggling readers. This was demonstrated by significant gains made on measures of phonological awareness, word attack, word identification, and fluency. Furthermore, improvements in word reading skills were also associated with improvements in reading comprehension (Gunn et al., 2000, 2005).

In relation to comprehension, most studies that added a comprehension component reported a positive effect on that skill, including the modified version of Proactive Reading and the comprehensive reading interventions described last (Linan-Thompson, Vaughn et al., 2003; Vaughn, Linan-Thompson, & Hickman, 2003; Vaughn, Linan-Thompson, Kouzakanani et al., 2003; Vaughn, Linan-Thompson et al., 2006; Vaughn, Mathes et al., 2006). Therefore, it can be concluded that addressing word reading skills should be a major component of any early reading interventions. Also, adding comprehension instruction to reading intervention enhances the reading outcomes of ELLs.

**Language and Reading Instruction**

Two important issues constantly addressed in the literature concerning effective literacy instruction for Spanish-speaking ELLs are (a) language of instruction (Vaughn et al., 2006), and (b) level of English oral proficiency (Ehri & Roberts, 2006). Many researchers state that reading development is facilitated when instruction is given in the students’ native language (Slaving & Cheung, 2005; Greene, 1997). Yet, national data show that approximately 60% of all ELLs are being instructed in English (August, 2006; Goldenberg, 2008). Since Spanish-speaking ELLs are performing below level on measures of reading achievement (Klingner et al., 2006), it is important to identify interventions that match the students’ language of instruction and that effectively
support students reading development in English. This review of the literature provides ample support for the use of English interventions. Across studies, ELLs improved on different measures of reading, including word reading skills (i.e., phonemic awareness, decoding), fluency, and comprehension. Interestingly, students responded positively to interventions designed originally for monolingual English-speaking students, some of which included language accommodations (i.e., Linan-Thompson et al., 2006; Vaughn, Cirino et al., 2006; Vaughn, Mathes et al., 2006) and some of which did not (i.e., Al Otaiba, 2005; Kamps et al., 2007; Neal & Kelly, 1999).

Regarding level of language proficiency, there is a common view that in order to benefit from reading instruction students first need to acquire oral English proficiency (Ehri & Roberts, 2006). In fact, many educational programs choose to delay reading interventions for ELLs until they develop sufficient English oral skills (Gunn et al., 2005). This practice is extremely harmful for young children given that it takes at least 5 to 7 years for a student to become a fluent speaker of English (Collier, 1989; Cummins, 1981). According to Torgesen (1998), “the consequences of a slow start in reading become monumental as they accumulate exponentially over time” (p. 1). Statistics show that a gap already exists between ELLs and English native speakers when they enter school (Lee, Griff, & Donahue, 2007). Therefore, delaying instruction only places ELLs at a higher risk for reading difficulties. Fortunately, the studies reviewed indicated that delaying instruction is not necessary, given that even students with limited English proficiency responded positively to reading instruction (i.e., Gunn et al., 2000; 2002; 2005; Linan-Thompson et al., 2006; Vaughn, Mathes et al., 2006). According to Gunn and colleagues (2000), since limited English proficiency does not limit students'
response to intervention schools can help ELLs succeed by intervening as early as first grade.

**Strategies for English Language Learners**

Despite the fact that many ELLs improved their reading skills without receiving any type of language accommodations, researchers recommend including strategies that support the language needs of Spanish-speaking ELLs (Vaughn, Mathes, et al., 2006). For example, Linan-Thompson et al. (2003) used picture cards and quick definitions to explain unfamiliar words, distinguished between real and nonsense words during word work activities, and contrasted Spanish and English phonemes and word patterns to help students distinguish between the two. The interventions reviewed also provided other important elements of effective practice for ELLs: (a) explicit and systematic instruction (Helman, 2009), (b) ample opportunities for practice (Gersten & Geva, 2003), (c) small group instruction (Gersten et al. 2007), and (d) scaffolding (Watts-Taffe & Truscott, 2000). According to Goldenberg (2008), other strategies for ELLs who are being instructed in English include (a) visual cues and physical gestures, (b) clarification of words or passages to support comprehension, (c) providing opportunities to interact with the instructor and with peers, and (d) adjusting rate and complexity of speech to accommodate the language ability of the students.

**Implications for Research**

The findings from this literature review provide an empirical foundation for the present study. Results showed that Spanish-speaking ELLs who are instructed in English and who are struggling to read can benefit from English reading interventions that target word reading skills. Furthermore, interventions originally developed for monolingual struggling readers offer the kind of instruction that supports the reading
development of ELLs with different levels of oral language proficiency. Due to the high percentage of Spanish-speaking ELLs receiving reading instruction in English, it is important to identify other English interventions that have already proven to be effective for monolingual struggling readers and evaluate their effectiveness with this population.

In particular, it is important to closely examine how students respond to intervention. While many studies have shown significant gains for students who participate in intensive reading programs, almost every study reported that some students fail to respond and continue to struggle in reading (Wanzek & Vaughn, 2008). According to Torgesen (2000), between 2% and 6% of students who participate in reading interventions continue to struggle afterwards. Torgesen suggested that these students may benefit from more intensive interventions. To make interventions more intensive, some researchers have decreased the group size and/or increased the amount of instruction provided (Berninger et al., 2002; McMaster et al., 2005; Torgesen et al., 2001), finding some positive results. Vaughn, Linan-Thompson and Hickman (2003) found that when more intervention was provided and instruction was modified to meet the specific needs of each individual, students responded positively. In contrast, Wanzek and Vaughn (2008) found that double doses of intervention were not effective for “low responders.”

Therefore, it is important to not only examine what interventions are effective, but also what interventions are effective for “treatment resisters” and under what conditions (Torgesen, 2000). For this reason, single subject design becomes a valuable research method because it allows researchers to identify the specific factors that either inhibit or enhance the efficacy of a particular intervention (Jitendra et al., 2004). Therefore, in the
study presented here, a multiple-baseline across groups design was used to evaluate the effectiveness of a modified version of the University of Florida Literacy Initiative (UFLI) tutoring program in developing the word reading skills of Spanish-speaking ELLs in second grade who are struggling to read.
CHAPTER 3
METHODS

This study implemented a multiple baseline across groups design to examine the effects of a modified version of the University of Florida Literacy Initiative (UFLI) small-group tutoring program on the reading skills of Spanish-speaking English language learners in second grade, who are experiencing reading difficulties. The purpose of this chapter is to provide a detailed description of the methods used to complete the study. The chapter addresses the following components: (a) setting, (b) participants, including selection criteria, (c) assessment instruments (d) interventions, (e) dependent variable, study design, and data analysis, (f) supplemental data, (g) interobserver agreement, treatment integrity, and social validity, (h) delimitations and limitations, (i) one-on-one tutoring methodology, and (j) pilot study data.

Setting

This study was conducted at Suwannee Elementary School in Suwannee County School District in Florida. Suwannee County School District is a rural district located in North Florida and is composed of seven schools and one technical center. For the year 2008-2009, the racial/ethnic composition of the district was approximately 73.9% White, 13.9% Black, 9.5% Hispanic, 0.5% Asian, 0.3% Indian, and 1.8% multiracial. Of these students, approximately 4% were identified as English language learners and 1.8% as migrant students. The district had approximately 60.3% of students participating in the free/reduced price lunch program (FLDOE, 2010b).

Suwannee Elementary is a Title I school that serves only second and third grade students. Approximately 73% of the school’s students participated in the free/reduced price lunch program in the year 2008-2009. That same year, the school had a total of
778 students enrolled. Of these, 392 students were in second grade and 385 students in third grade (FLDOE, 2010c). The racial composition of the school was 64.9% White, 17.5% Black, 13.6% Hispanic, 0.8% Asian, 0.8% Indian, and 2.4% Multiracial. The school identified 7.6% of the students as English language learners and 2.3% as migrant (FLDOE, 2010a). According to the Florida Department of Education (FLDOE, 2009), the percentage of third grade students in each achievement level of the FCAT reading for the school in the year 2008-2009 was as follows: 16% at Level 1, 11% at Level 2, 35% at Level 3, 31% at Level 4, and 6% at Level 5. FCAT reading data for ELLs identified 53% at Level 1, 24% at Level 2, 18% at Level 3, 6% at Level 4, and 0% at Level 5.

Because Suwannee Elementary School had only second and third grades, there were more classrooms at these two grade levels than at a typical elementary school. According to school records, on the year 2009-2010, there were 21 second-grade classrooms with a total of 374 students. Six of these classrooms (12 to 16 students per class) had been designated for lower performing students, and all participants in the study were from these classrooms. The lower performing classrooms used a “double dose” approach to reading in an effort to help students catch up to grade level. This meant that these classrooms had 180 minutes of reading instruction daily. The school used the Harcourt StoryTown Core Reading Program (Beck et al., 2007), which is one of the approved programs for adoption in Florida because it meets the criteria outlined by the State. Within the 180 minutes of reading instruction, teachers also provided 45 minutes of small group intervention using one of two programs: Harcourt Reading Interventions or SRA Early Interventions in Reading (SRA/EIR; Mathes & Torgesen,
Teachers had the option of selecting which program to use in their classrooms. All of the participants in the study received at least one of these interventions. All the teachers of the participating students had Florida ESOL endorsement on their teaching certificates.

**Participants**

The purpose of this section is to provide a description of the participants, including selection criteria and selection process. As required by the University of Florida Institutional Review Board (IRB), the investigator obtained informed consent from the parents of children participating in the study, as well as informed assent from each child. For copies of IRB documentation, including the study protocol, consent letters, and assent form, see Appendix A.

The following criteria were used to select participants for this study:

1. The child was identified by the school as being an English language learner whose native language was Spanish. This criterion was established because the focus of the study is on the effects of the UFLI intervention with this population.

2. The child was in second grade. This criterion was established because the UFLI program recommends that intervention beginning during the fall should target second graders. First graders tend to need a semester of reading instruction before they are ready to benefit from UFLI tutoring.

3. The child was performing below level based on three measures of reading ability. Although teacher judgment was the initial identifying factor, this criterion was established to ensure that the judgment of the teacher could be corroborated with assessment data.

4. The child’s record for the past year showed regular school attendance and low percentage of tardiness. This criterion was established to ensure that the intervention could proceed without excessive interruption and to minimize participant attrition.

The selection process proceeded according to several prescribed steps. School personnel (i.e., principal, reading coach, and teachers) were asked to identify second
grade English language learners, whose native language was Spanish, and who were performing below grade level based on their latest end-of-year Stanford Achievement Test-10 (SAT-10) and the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) scores. A total of 24 students were identified. To corroborate that these students were still performing below grade level, teachers were asked to administer the Invented Spelling Assessment (Lane & Pullen, 2004). The spelling sheets were given back to the researcher to be graded. In order to protect the identity of the students, teachers assigned a number to each student’s spelling sheet. Based on these results, a total of 16 students who scored below the 40th percentile on Invented Spelling were selected to participate in the study. Consent forms were sent by the school principal to the parents of these students asking their permission to conduct further assessment and to participate in the study. Up until this point, the researcher did not have access to students’ names.

A total of 13 students received parental consent, but one of them was dropped from the study because his mother stated that the child did not speak Spanish. The new pool of participants consisted of 12 students. Next, the researcher took running records from each child using Reading Recovery books to identify their instructional reading level at which students were reading with 90% to 95% of accuracy. Out of the 12 students, one was dropped because he read a level 19 book with 96% reading accuracy, when the goal for the beginning of second grade is level 17. Thus, based on this criterion, the student was not in need of reading intervention and would not have benefitted from the study. Later, when groups were formed, a second student was dropped from the group intervention because she could not be placed in any of the
three reading groups. This student was reading at a book level that was too high for
Group 2 and too low for Group 1. Still, she received the UFLI tutoring program on a one-
on-one basis, but not as part of the multiple-baseline design. A description of the
methods used with this student is provided at the end of this chapter, and results
obtained are presented at the end of chapter 4. The final pool of students who received
group instruction included 10 participants. Students’ data on group composition and
initial book levels can be found in Table 3-1. A detailed description of the procedure
used to identify initial book levels for each participant and the percentages of accuracy
can be found in the assessment section, under Grouping Instruments. A summary of
this procedure for each participant is also provided in Table 3-7.

<table>
<thead>
<tr>
<th>Group number</th>
<th>Number of members</th>
<th>Males</th>
<th>Females</th>
<th>Beginning book level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
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<td>3</td>
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</tr>
<tr>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

What follows is a description of each participant’s (a) demographic information, (b)
instructional information, (c) reading scores used for selection purposes, (d) English and
Spanish oral language proficiency, and (e) classroom attitudes and behaviors.
Throughout this report of the study, pseudonyms are used to protect the identity of the
participants. Demographic information was obtained from parents through a home
language survey (Appendix B), teachers, and students when needed. This information
includes age, gender, parent nationality, languages spoken at home, language used to
communicate with child, years of schooling in US, and parental level of education.
Demographic data can be found in Table 3-2. Instructional information was gathered
Table 3-2. Summary of participants' demographic information

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Gender</th>
<th>Parents' nationality</th>
<th>Language(s) spoken at home</th>
<th>Language used to communicate with child</th>
<th>Years of schooling in US</th>
<th>Parent's level of education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia</td>
<td>7-8</td>
<td>F</td>
<td>Mexico</td>
<td>Spanish/ English</td>
<td>Spanish/ English</td>
<td>3 years</td>
<td>Not Available</td>
</tr>
<tr>
<td>Pedro</td>
<td>8-8</td>
<td>M</td>
<td>Cuba</td>
<td>Spanish/ English</td>
<td>Spanish</td>
<td>4 years</td>
<td>Community College</td>
</tr>
<tr>
<td>Jessica</td>
<td>8-3</td>
<td>F</td>
<td>Mexico</td>
<td>Spanish/ English</td>
<td>Spanish</td>
<td>6 years</td>
<td>No schooling</td>
</tr>
<tr>
<td>Viviana</td>
<td>8-5</td>
<td>F</td>
<td>Guatemala</td>
<td>Spanish/ Conjoval</td>
<td>Spanish</td>
<td>5 years</td>
<td>No schooling</td>
</tr>
<tr>
<td>Ernesto</td>
<td>8-10</td>
<td>M</td>
<td>El Salvador</td>
<td>Spanish</td>
<td>Spanish</td>
<td>5 years</td>
<td>High school</td>
</tr>
<tr>
<td>Maggie</td>
<td>8-8</td>
<td>F</td>
<td>Mexico</td>
<td>Spanish</td>
<td>Spanish</td>
<td>5 years</td>
<td>No schooling</td>
</tr>
<tr>
<td>Maria</td>
<td>8-8</td>
<td>F</td>
<td>Mexico</td>
<td>Spanish</td>
<td>Spanish</td>
<td>5 years</td>
<td>High school</td>
</tr>
<tr>
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<td>10-1</td>
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<td>Guatemala</td>
<td>Spanish</td>
<td>Spanish</td>
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<td>No schooling</td>
</tr>
<tr>
<td>Aldo</td>
<td>9-3</td>
<td>M</td>
<td>Mexico</td>
<td>Spanish/ English</td>
<td>Spanish</td>
<td>4 years</td>
<td>No schooling</td>
</tr>
<tr>
<td>Jorge</td>
<td>9-5</td>
<td>M</td>
<td>Mexico</td>
<td>Spanish</td>
<td>Spanish</td>
<td>5 years</td>
<td>No schooling</td>
</tr>
</tbody>
</table>
from teachers and school personnel (e.g., reading coach) about the grades in which students have been retained, the amount of reading instruction students receive daily, the core reading program covered in the classroom, additional reading interventions students received, language status (i.e., LEP /limited English proficiency, ELL/English language learner), LEP classes provided, migrant status, ESE classification, and ESE services rendered. A summary of this information can be found in Table 3-3.

Reading scores are reported based on the latest scores from the end-of-year SAT-10 and the DIBELS Phoneme Segmentation Fluency (PSF), Nonsense Word Fluency (NWF) and Oral Reading Fluency (ORF) subtests. For students that were retained in second grade, only NWF and ORF scores are reported. Reading scores also included beginning-of-year Invented Spelling Assessment scores for all students (Lane & Pullen, 2004). These scores can be found in Table 3-4. English and Spanish oral language proficiency levels were obtained using the Woodcock-Munoz Language Survey-Revised (WMLS-R; Woodcock, Munoz-Sandoval, Ruef, & Alvarado, 2005). Language levels are reported in Table 3-5. Finally, classroom attitudes and behaviors were rated by teachers using the Conners’ Abbreviated Teacher Rating Scale (C-ATRS). A summary of results can be found in Table 3-6. Refer to the assessment section later in this chapter for a detailed description on each of these measures.

Amelia. Amelia was a Hispanic female, aged 7 years-8 months, enrolled in second grade for the first time. Given that Amelia’s parents did not return the home language survey, the demographic information reported is based on data gathered from Amelia and her teacher. Amelia stated that her parents are from Mexico and they speak
<table>
<thead>
<tr>
<th>Name</th>
<th>Grades Retained</th>
<th>Other reading interventions</th>
<th>Migrant status</th>
<th>Language status</th>
<th>Received LEP classes</th>
<th>ESE classification</th>
<th>Received ESE services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia</td>
<td>None</td>
<td>HR</td>
<td>No</td>
<td>ELL/LEP</td>
<td>No</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>Pedro</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>SRA/EIR</td>
<td>No</td>
<td>ELL</td>
<td>No</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>Jessica</td>
<td>K</td>
<td>SRA/EIR</td>
<td>No</td>
<td>ELL/LEP</td>
<td>No</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>Viviana</td>
<td>K</td>
<td>HR</td>
<td>Yes</td>
<td>ELL/LEP</td>
<td>Yes (30 min/3 times week)</td>
<td>Language disability</td>
<td>None</td>
</tr>
<tr>
<td>Ernesto</td>
<td>K</td>
<td>SRA/EIR</td>
<td>No</td>
<td>ELL/LEP</td>
<td>No</td>
<td>Language disability</td>
<td>Speech therapy</td>
</tr>
<tr>
<td>Maggie</td>
<td>k, 2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>SRA/EIR</td>
<td>No</td>
<td>ELL/LEP</td>
<td>As needed</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>Maria</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>SRA/EIR</td>
<td>No</td>
<td>ELL/LEP</td>
<td>No</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>Jennifer</td>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>HR</td>
<td>Yes</td>
<td>ELL/LEP</td>
<td>Yes (30 min/3 times a week)</td>
<td>None</td>
<td>N/A</td>
</tr>
<tr>
<td>Aldo</td>
<td>k, 2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>SRA/EIR</td>
<td>Yes</td>
<td>ELL/LEP</td>
<td>Yes (30 min/3 times a week)</td>
<td>Language disability</td>
<td>Speech therapy</td>
</tr>
<tr>
<td>Jorge</td>
<td>k, 2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>SRA/EIR</td>
<td>No</td>
<td>ELL</td>
<td>Yes (30 min/3 times a week)</td>
<td>None</td>
<td>N/A</td>
</tr>
</tbody>
</table>

HR = Harcourt Reading Interventions, SRA/EIR = SRA Early Interventions in Reading, ELL = English language learners, and LEP = limited English proficient. For ESE services, N/A stands for not applicable. This was used for students that did not have an ESE classification. “None” was used when a student had an ESE classification, but did not receive ESE services.
Table 3-4. Participants’ reading scores used for selection purposes

<table>
<thead>
<tr>
<th>Name</th>
<th>SAT-10 (percentiles)</th>
<th>DIBELS/PSF (number of phonemes per minute)</th>
<th>DIBELS/NWF (number of correct letter-sounds read per minute)</th>
<th>DIBELS/ORF (number of correct words per minute)</th>
<th>Invented Spelling (percentiles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia</td>
<td>42</td>
<td>56 (AA)</td>
<td>67 (LR)</td>
<td>48 (LR)</td>
<td>20-30</td>
</tr>
<tr>
<td>Pedro</td>
<td>35</td>
<td></td>
<td>89 (AA)</td>
<td>68 (HR)</td>
<td>20</td>
</tr>
<tr>
<td>Jessica</td>
<td>46</td>
<td>36 (LR)</td>
<td>52 (LR)</td>
<td>57 (LR)</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Viviana</td>
<td>9</td>
<td>49 (LR)</td>
<td>49 (MR)</td>
<td>26 (MR)</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Ernesto</td>
<td>13</td>
<td>43 (LR)</td>
<td>46 (MR)</td>
<td>26 (MR)</td>
<td>10-20</td>
</tr>
<tr>
<td>Maggie</td>
<td>13</td>
<td></td>
<td>58 (LR)</td>
<td>39 (HR)</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Maria</td>
<td>15</td>
<td></td>
<td>58 (LR)</td>
<td>23 (HR)</td>
<td>20-30</td>
</tr>
<tr>
<td>Jennifer</td>
<td>13</td>
<td></td>
<td>49 (MR)</td>
<td>2 (HR)</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Aldo</td>
<td>7</td>
<td></td>
<td>4 (HR)</td>
<td>4 (HR)</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Jorge</td>
<td>11</td>
<td></td>
<td>17 (HR)</td>
<td>5 (HR)</td>
<td>&lt;10</td>
</tr>
</tbody>
</table>

Scores for SAT-10 and DIBELS correspond to the end of the previous academic year. For Amelia, Jessica, Viviana, and Ernesto, those scores correspond to the end of first grade. For the rest of the students, the scores correspond to the end of second grade, since they were retained the previous year. Those students do not have PSF scores because that test is not implemented at the end of second grade. No SAT-10 score was available for Jennifer. Invented spelling scores correspond to the beginning of the current year.

Table 3-5. Students’ English and Spanish language levels based on the WMLSR

<table>
<thead>
<tr>
<th>Name</th>
<th>English CALP</th>
<th>English language ability</th>
<th>Spanish CALP</th>
<th>Spanish language ability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia</td>
<td>Level 3</td>
<td>Limited</td>
<td>Level 3</td>
<td>Limited</td>
</tr>
<tr>
<td>Pedro</td>
<td>Level 3</td>
<td>Limited</td>
<td>Level 4</td>
<td>Fluent</td>
</tr>
<tr>
<td>Jessica</td>
<td>Level 3</td>
<td>Limited</td>
<td>Level 3</td>
<td>Limited</td>
</tr>
<tr>
<td>Viviana</td>
<td>Level 2</td>
<td>Very limited</td>
<td>Level 3</td>
<td>Limited</td>
</tr>
<tr>
<td>Ernesto</td>
<td>Level 3</td>
<td>Limited</td>
<td>Level 3</td>
<td>Limited</td>
</tr>
<tr>
<td>Maggie</td>
<td>Level 3</td>
<td>Limited</td>
<td>Level 3</td>
<td>Limited</td>
</tr>
<tr>
<td>Maria</td>
<td>Level 4</td>
<td>Fluent</td>
<td>Level 3</td>
<td>Limited</td>
</tr>
<tr>
<td>Jennifer</td>
<td>Level 1</td>
<td>Negligible</td>
<td>Level 3</td>
<td>Limited</td>
</tr>
<tr>
<td>Aldo</td>
<td>Level 3</td>
<td>Limited</td>
<td>Level 2</td>
<td>Very limited</td>
</tr>
<tr>
<td>Jorge</td>
<td>Level 3.5</td>
<td>Limited to fluent</td>
<td>Level 3.5</td>
<td>Limited to fluent</td>
</tr>
</tbody>
</table>

CALP scores correspond to the level of cognitive-academic language proficiency. CALP scores go from Level 1 (negligible English ability) to Level 6 (very advanced English ability).

Spanish and English at home. According to Amelia, she uses both languages to communicate with her parents. Information about her parents’ level of education is unknown. School records showed that she had attended school in the US at least since kindergarten. Her teacher reported that Amelia received the Harcourt Reading
Table 3-6. Conners’ Abbreviated Teacher Rating Scale (C-ATRS)

<table>
<thead>
<tr>
<th>Name</th>
<th>Restless or Overactive</th>
<th>Excitable/Impulsive</th>
<th>Disturbs Others</th>
<th>Fails to Finish Things</th>
<th>Constant Fidgeting</th>
<th>Inattentive</th>
<th>Easily Frustrated</th>
<th>Cries Often</th>
<th>Quick Mood Changes</th>
<th>Temper Outburst/Unpredictable Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia</td>
<td>NA</td>
<td>NA</td>
<td>JL</td>
<td>JL</td>
<td>JL</td>
<td>JA</td>
<td>PM</td>
<td>JL</td>
<td>JL</td>
<td>JL</td>
</tr>
<tr>
<td>Pedro</td>
<td>PM</td>
<td>JL</td>
<td>PM</td>
<td>NA</td>
<td>JL</td>
<td>JL</td>
<td>NA</td>
<td>NA</td>
<td>JA</td>
<td>NA</td>
</tr>
<tr>
<td>Jessica</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Viviana</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Ernesto</td>
<td>VM</td>
<td>PM</td>
<td>NA</td>
<td>JL</td>
<td>VM</td>
<td>VM</td>
<td>JL</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Maggie</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>JL</td>
<td>NA</td>
<td>JL</td>
<td>NA</td>
</tr>
<tr>
<td>Maria</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Jennifer</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Aldo</td>
<td>PM</td>
<td>PM</td>
<td>JL</td>
<td>PM</td>
<td>JL</td>
<td>VM</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Jorge</td>
<td>PM</td>
<td>JL</td>
<td>PM</td>
<td>VM</td>
<td>VM</td>
<td>VM</td>
<td>JL</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

For the C-ATRS, NA stands for not at all, JL stands for just a little, PM stands for pretty much, and VM stands for very much.

Intervention program 45-minutes a day, five days a week. Amelia was identified by the school as being LEP (limited English proficient) and enrolled in LEP classes, but her teacher stated that Amelia did not receive these services.

At the end of first grade, Amelia scored in the 42nd percentile on the SAT-10. Her DIBELS scores for the end of first grade were 56 on PSF (above average), 67 on NWF (low risk), and 48 on ORF (low risk). At the beginning of second grade, she scored in the 20th to 30th percentile on the Invented Spelling Assessment. Based on the WMLS-R, Amelia demonstrated limited English and Spanish oral language proficiency (Level 3). On the C-ATRS, her teacher reported that Amelia would get easily frustrated and tended to be a little distracted in class. She stated that Amelia “does not like to not know what to do.” She also affirmed that Amelia “withdraws if she is unsure” of something. One area of concern reported by her teacher on different occasions was that Amelia had “no support from home.” Her teacher also reported that Amelia’s mother had spent
extensive time in jail, and attempts for written or oral communication with her guardian tended to be unsuccessful.

**Pedro.** Pedro was a Hispanic male, aged 8 years-8months, enrolled in second grade for the second time. His parents were from Cuba and they spoke Spanish and English, but only used Spanish to communicate with Pedro. Pedro’s parents stated that their highest level of education corresponded to community college. They also reported that Pedro had had four years of schooling in the US. His current teacher stated that Pedro received SRA Early Reading Interventions (SRA/EIR) – Level 1 (first grade) for 45 minutes a day, five days a week. The school considered Pedro to be an English language learner, but he no longer had an LEP status. He did not receive LEP classes.

At the end of second grade from the previous academic year, Pedro scored in the 35th percentile on the SAT-10. His DIBELS scores for the end of second grade were 89 on NWF (above average) and 68 on ORF (high risk). At the beginning of second grade of the current year, he scored in the 20th percentile on the Invented Spelling Assessment. Language scores based on the WMLS-R, showed that Pedro had limited English oral language ability (Level 3) and fluent Spanish oral language ability (Level 4). According to teacher’s report on the C-ATRS, “Pedro is a good student but likes to talk to other students.” The teacher also reported that he was a little bit impulsive and easily distracted.

**Jessica.** Jessica was a Hispanic female, aged 8 years-3months, enrolled in second grade for the first time. Her parents were from Mexico and they spoke English and Spanish. At home, they used Spanish to communicate with Jessica. Her parents reported not having any schooling experience. Jessica’s parents stated that she had
received six years of schooling in the US. School records showed that she was previously retained in kindergarten. In second grade, Jessica participated in the SRA/EIR program – Level 1 (first grade) for 45 minutes a day, five days a week. Jessica had an LEP status and the school reported that she was enrolled in LEP classes; yet, her teacher affirmed that she did not receive those services.

Reading scores for the end of first grade showed that Jessica scored in the 46th percentile on the SAT-10. Her DIBELS at the time were 36 on PSF (low risk), 52 on NWF (low risk), and 57 on ORF (low risk). At the beginning of second grade, she scored below the 10th percentile on the Invented Spelling Assessment. Language scores on the WMLS-R showed that Jessica had limited English and Spanish oral language ability (Level 3). On the C-ATRS, her teacher reported that Jessica did not have any attitude or behavior problems in class.

**Viviana.** Viviana was a Hispanic female, aged 8 years-5 months, enrolled in second grade for the first time. Her mother was from Guatemala and they spoke Spanish and Conjoval at home. Conjoval is a Mayan oral language, with no written form. To communicate at home, they used Spanish. Her mother reported not finishing high school. Her mother stated that Viviana had had five years of instruction in the US. School records showed that she was retained in kindergarten. In second grade, she received Harcourt Reading Interventions in small groups, five times a week, for 45 minutes. Viviana had both migrant and LEP status. She received LEP classes 3 times a week for 30 minutes. She was also identified as having a language disability. Her teacher reported that Viviana did not receive ESE services.
Reading scores showed that at the end of first grade, Viviana scored in the 9th percentile on the SAT-10. Her DIBELS scores for the end of first grade were 49 on PSF (low risk), 49 on NWF (moderate risk), and 20 on ORF (moderate risk). At the beginning of second grade, she scored below the 10th percentile on the Invented Spelling Assessment. Language scores on the WMLS-R demonstrated that she had very limited English oral language ability (Level 2) and limited Spanish oral language ability (Level 3). The teacher’s report on the C-ATRS showed that Viviana had no attitude or behavior problems in the class. Her teacher stated on many occasions that Viviana was a “very sweet girl, very respectful” and that she “always smiled.”

Ernesto. Ernesto was a Hispanic male, aged 8 years-10months, enrolled in second grade for the first time. He was previously retained in second grade. His parents were from El Salvador and they only spoke Spanish at home. The highest level of education that parents reported having was high school. Ernesto had had five years of schooling in the US. His teacher reported that he received the SRA/EIR program – Level 1 in small groups, for 30 minutes a day, five days a week. He also received the Harcourt Interventions small group program five times a week for 45 minutes. Ernesto had an LEP status but did not receive LEP classes, despite records showing that he was enrolled in them. He was identified as having a language disability and he received speech therapy two times a week for 20 minutes. Ernesto was also referred to the school psychologist to be tested for autism, but results are still pending.

At the end of first grade, Ernesto scored in the 13th percentile on the SAT-10. His DIBELS scores for the end of first grade were 43 on PSF (low risk), 46 on NWF (moderate risk) and 26 on ORF (moderate risk). At the beginning of second grade, he
scored between the 10\textsuperscript{th} and 20\textsuperscript{th} percentile on the Invented Spelling Assessment. Language results on the WMLS-R showed that Ernesto had limited English and Spanish oral language ability (Level 3). On the C-ATRS, his teacher reported that he is sweet and loves to learn, but tends to be restless, impulsive and inattentive. She stated that Ernesto lacked “focus in a whole group” but did much better on “one-on-one or small group.”

\textbf{Maggie.} Maggie was a Hispanic female, aged 8 years-8months, enrolled in second grade for the second time. She was retained once in kindergarten as well. Her parents were from Mexico and they only spoke Spanish at home. They reported not having any schooling experience. They also stated that Maggie had had five years of schooling in the US. Her teacher reported that Maggie participated in the SRA/EIR intervention for 45 minutes, five days a week. She was identified as being LEP and receiving LEP classes, but her teacher stated that those services were provided only as needed.

Reading scores showed that at the end of second grade from the previous year, she scored in the 13\textsuperscript{th} percentile on the SAT-10. Her DIBELS scores for the end of second grade were 58 on NWF (low risk), and 39 on ORF (high risk). At the beginning of second grade of the current year, she scored below the 10\textsuperscript{th} percentile on the Invented Spelling Assessment. Based on the WMLS-R, Maggie demonstrated limited English and Spanish oral language ability (Level 3). Her teacher reported on the C-ATRS that Maggie would get easily frustrated and tended to cry often and easily. She also affirmed on different occasions that she was “insecure” and constantly looked for her approval.
**Maria.** Maria was Hispanic female, aged 8 years-8 months, enrolled in second grade for the second time. Her parents were from Mexico and they only spoke Spanish at home. Their highest level of education reported was high school. Maria had had five years of schooling in the US. In second grade, she received 45 minutes of SRA/EIR small group intervention, five times a week. School records showed that Maria had an LEP status and was enrolled in LEP classes; still, her teacher reported that she did not receive those services. Maria was the only study participant who did not participate in the free or reduced-price lunch program.

Maria’s end-of-second-grade scores from the previous year showed that she scored in the 15th percentile on the SAT-10. Her DIBELS scores were 58 on NWF (low risk) and 23 on ORF (high risk). At the beginning of second grade of the current year, she scored between the 20th and 30th percentile on the Invented Spelling Assessment. Language scores on the WMLS-R demonstrated that Maria had fluent English oral language ability (Level 4) and limited Spanish oral language ability (Level 3). On the C-ATRS, her teacher stated that Maria did not have any attitude or behavioral problems in class.

**Jennifer.** Jennifer was a Hispanic female, aged 10 years-1 month, enrolled in second grade for the second time. Her mother was from Guatemala and they only spoke Spanish at home. Her mother reported not having any schooling experience. She also stated that Jennifer had had one year of schooling in the US. Her teacher reported that she received 45 minutes of Harcourt Intervention five times a week. She had both migrant and LEP status. School records showed that she received LEP classes three times a week for 30 minutes.
Reading scores at the end of second grade from the previous year showed that Jennifer scored 0 on the SAT-10. Her DIBELS scores for the end of second grade were 49 on NWF (moderate risk), and 2 on ORF (high risk). At the beginning of second grade of the current year, she scored below the 10th percentile on the Invented Spelling Assessment. The WMLS-R showed that Jennifer had negligible English oral language ability (Level 1) and limited Spanish oral language ability (Level 3). On the C-ATRS, her teacher reported that Jennifer had no attitude or behavioral problems in class. On one occasion, her teacher affirmed that one of Jennifer’s “biggest challenges” was her limited English oral skills, but that she was eager to learn.

**Aldo.** Aldo was a Hispanic male, aged 9 years-3months, enrolled in second grade for the second time. He was also previously retained in kindergarten. His parents were from Mexico and were able to speak English and Spanish. At home, they only used Spanish to communicate with Aldo. They reported not having any schooling experience. Aldo’s parents reported that he had had 4 years of schooling in the US. Aldo participated in the SRA/EIR program – Level 1, 45 minutes a day, five days a week. School records showed that Aldo had migrant and LEP status. He participated in LEP classes three times a week for 30 minutes. Aldo was identified as having a language disability and received speech therapy one time a week for 30 minutes.

At the end of second grade the previous year, he scored in the 7th percentile on the SAT-10. His DIBELS scores for the end of second grade were 4 on NWF (high risk) and 4 on ORF (high risk). At the beginning of second grade of the current year, he scored below the 10th percentile on the Invented Spelling Assessment. Based on the WMLS-R, Aldo demonstrated limited English oral language ability (Level 3) and very
limited Spanish oral language ability (Level 2). Aldo’s teacher reported on the C-ATRS that he had a short attention span, and that he was restless, impulsive, and easily distracted. She also stated that Aldo did not make much progress the previous year and that he was the lowest performing student in her class.

**Jorge.** Jorge was a Hispanic male, aged 9 years-5 months, enrolled in second grade for the second time. He was also previously retained in kindergarten. Jorge’s parents were from Mexico and they only spoke Spanish. They reported not having any schooling experience. Jorge’s parents stated that he had had 5 years of schooling in the US. His teacher affirmed that Jorge participated in the SRA/EIR program for 45 minutes a day, five days a week. School records showed that Jorge no longer had an LEP status, but his teacher affirmed that LEP classes were provided as needed.

At the end of second grade of the previous year, he scored in the 11th percentile on the SAT-10. His DIBELS scores for the end of second grade were 17 on NWF (high risk) and 5 on ORF (high risk). At the beginning of second grade of the current year, he scored below the 10th percentile on the Invented Spelling Assessment. Based on the WMLS-R, Jorge demonstrated limited to fluent English and Spanish oral language ability (Level 3.5). On the C-ATRS, his teacher reported that he was impulsive and restless in class, and that he tended to avoid work and to disturb his classmates. She also affirmed that Jorge had a short attention span and was very inattentive in class. According to her, one of Jorge’s biggest challenges was his behavior. He had been referred and suspended for stealing, for being disrespectful, and for making threatening statements toward his peers.
Assessment Instruments

There were four types of assessments instruments given to the participants: (a) screening instruments, (b) grouping instruments, (c) supplemental instruments, and (d) probes of student progress on the dependent variable. The following sections contain a description of each of the first three types of assessments. A description of the probes is presented in the Dependent Variables section.

Screening Instruments

As part of the selection process, students’ scores on three measures of reading performance were analyzed to help determine eligibility for this study: (a) SAT-10, (b) DIBELS, and (c) Invented Spelling Assessment. Additional measures were given to selected participants to establish their level oral language proficiency (WMLS-R), and their classroom attitudes and behaviors (C-ATRS). What follows is a brief description of each measure.

**Stanford Achievement Test-10 (SAT-10).** The SAT-10 is a group-administered, standardized measure of reading achievement for grades K to 12, currently used in Florida Reading First schools. The test is untimed and uses a multiple-choice format. The reading portion assesses phonemic awareness, decoding, phonics, vocabulary, and comprehension. Scoring is conducted by the test publisher. Student scores are reported in percentiles. Scores for SAT-10 were obtained from the school.

**Dynamic Indicators of Basic Early Literacy Skills (DIBELS).** DIBELS (Good & Kaminski, 2002) is a set of tests designed to screen and monitor students’ reading skills from K to 3rd grade. In this study, the latest end-of-year scores were obtained from the school for each of the 10 participants. For Amelia, Jessica, Viviana, and Ernesto the DIBELS scores reported corresponded to the end of first grade. For all other
participants, end-of-year scores corresponded to the end of second grade because they had been retained.

The tests administered at the end of first grade are (a) Phoneme Segmentation Fluency (PSF), (b) Nonsense Word Fluency (NWF), and (c) Oral Reading Fluency (ORF). All these tests are timed with the purpose of assessing students’ level of automaticity. The PSF is a test of phonological awareness that evaluates the ability to fluently segment words into phonemes. The test takes approximately 2 minutes to administer. The benchmark goal for the end of first grade is >35. The alternate-form reliability of the PSF is .79. The NWF is a test of the alphabetic principle and the ability to blend letters into words. It takes approximately 2 minutes to administer. The benchmark goal for the end of first grade, as well as the end of second grade is >50 correct letter sounds per minute. The alternate-form reliability for the NWF is .83. The ORF is a test of reading accuracy and fluency of connected text. It uses a set of passages that students read aloud for one minute. The oral reading fluency rate corresponds to the number of correct words read per minute. The benchmark goal for the end of first grade is >40 correct words per minute and for the end of second grade is >90 correct words per minute. The DIBELS provides four types of risk status that identify need for additional and substantial intervention: (a) above average (at or above the 60th percentile, no need for additional intervention), (b) low risk (at grade level, no need for additional intervention, (c) moderate risk (moderately below grade level, requires additional intervention), and (d) high risk (significantly below grade level, requires substantial intervention; Florida Center for Reading Research, 2006).
Invented Spelling Assessment: A Sound Beginning. The Invented Spelling Assessment (Lane & Pullen, 2004) was developed as a measure of phonological awareness and understanding of the alphabetic principle. In this assessment, the examiner dictates ten unfamiliar words and the student attempts to write them. The examiner then assigns points to each word based on its phonological accuracy. The scoring scale goes from 0 to 4 points based on the level of phonological accuracy of the student’s spelling. On average, a score below three points per word indicates that the student lacks appropriate phonological skills. The Invented Spelling Assessment offers percentile ranks for fall of second grade based on a sample of 2,000 students in kindergarten to second grade. The assessment has a interscorer reliability of >.97 (Lane & Pullen, 2004). A score below the 40th percentile indicates a need for reading intervention.

Woodcock-Muñoz Language Survey – Revised (WMLS-R). The WLMS-R (Woodcock, Muñoz-Sandoval, Ruef, & Alvarado, 2005) is an individually administered test of oral language, language comprehension, reading and writing proficiency. It was developed with the purpose of determining language proficiency, language dominance, changes in language ability, eligibility for educational services, readiness for English-only instruction, among others. The survey has two parallel forms, one in English and one in Spanish, which can be used with individuals ranging from 2 years old to more than 90 years old. Each form takes approximately 45 minutes to administer.

The WMLS-R English form has seven tests: Test 1-Picture Vocabulary, Test 2-Verbal Analogies, Test 3-Letter-Word Identification, Test 4-Dictation, Test 5-Understanding Directions, Test 6-Story Recall, and Test 7-Passage Comprehension. A
cluster score for oral language-total can be obtained by combining tests 1, 2, 5, and 6. This cluster represents a broad measure of language competency. The WMLS-R Spanish form has seven equivalent tests: Test 1-Vocabulario sobre Dibujos, Test 2-Analogías Verbales, Test 3-Identificación de Letras y Palabras, Test 4-Dictado, Test 5-Comprensión de Indicaciones, Test 6-Rememoración de cuentos, and Test 7-Comprensión de Textos. The corresponding oral language – total (lenguaje oral – total) can be obtained by combining tests 1, 2, 5, and 6 (Alvarado, Ruef, & Schrank, 2005).

The standardization sample of the WMLS-R English form consisted of 8,818 individuals, ages 2 to over 90 years old, representing different regions of the country, different races, types of schools, etc. The calibration sample for the WMLS-R Spanish form consisted of 1,157 native Spanish-speaking individuals from different regions inside and outside the United States (e.g., Mexico, Argentina, Panama, Costa Rica, Colombia, and Puerto Rico; Alvarado et al., 2005). The split-half test of reliability ranged from .76 to .97 for tests and from .88 to .98 for clusters.

One of the scores yielded by the WLMS-R is the Cognitive-Academic Language Proficiency (CALP). The CALP measures students’ proficiency with “context reduced and cognitively demanding language” (Alvarado et al., 2005, p. 61). CALP scores have six levels and two “regions of uncertainty” for the different clusters. In each of these levels, cognitive-academic language proficiency is identified as it compares to others of the same age or grade level. Each level has specific implications for instruction as it relates to context-reduced and cognitively demanding language learning tasks in each language. At Level 1 students’ proficiency is negligible (imperceptible). They are likely to find language demands impossible to handle. In Level 2 proficiency is very limited (muy
limitado) and students are expected to find language demands extremely difficult.

Students in Level 3 have limited (limitado) proficiency and find language demands very difficult. In Level 4, proficiency is fluent (fluido). Students tend to find language demands manageable. Level 5 is characterized by advanced (avanzado) proficiency, where students are likely to find language demands very easy. Finally, in Level 6 proficiency is very advanced (muy avanzado) and students are expected to find language demands extremely easy. In addition to the six levels, the two “regions of uncertainty” include Level 3-4 (3.5), where students have limited to fluent proficiency (limitado a fluido) and Level 4-5 (4.5), where students have fluent to advanced proficiency (fluido a avanzado; Alvarado et al., 2005). In this study, CALP scores for the English and Spanish Oral Language-Total cluster were used.

**Conners’ Abbreviated Teacher Rating Scale (C-ATRS).** The C-ATRS is an abbreviated form of the Conners’ Teacher Rating Scale, developed to assess teacher’s perceptions of their students’ behavior in the classroom (Conners, Sitarenios, Parker, & Epstein, 1998). The scale has 10 items that describe different children’s behaviors (i.e., restless, excitable, inattentive). For each item, the teacher is asked to rate how much the child has shown the behavior in the last month. There are four possible options: not at all, just a little, pretty much, or very much.

**Home language survey.** The Home Language Survey was developed by the researcher with the purpose of obtaining demographic data and information about language practices taking place at the students’ homes. The survey was translated to Spanish to provide an option to parents who feel more comfortable reading in Spanish. Demographic information and responses about the language practices are reported on
an individual basis to enhance the profile information of each participant. Each of the participating students took home a survey, accompanied by a reminder letter that was also translated to Spanish (see Appendix B for a copy of both reminder letters) that explained the purpose of the survey, how to respond, and how to send it back. The response rate was 90%.

**Grouping Instruments**

With the purpose of assigning selected participants to an appropriate tutoring group, the researcher conducted measures of reading accuracy by taking running records of students reading leveled books. A running record (Clay, 1972) is an untimed measure of oral reading accuracy. The purpose is to analyze reading behaviors that shed light into the type of reading skills and strategies that students use when they interact with text (Denton, Ciancio, & Fletcher, 2006). Running records can be used to (a) estimate the rate of reading accuracy, (b) identify students’ reading levels (independent, instructional, or frustrating), (c) group students for instruction, (d) monitor reading progress, and (e) identify areas of strength and weakness, among others.

In this study, running records served to establish rates of reading accuracy in order to identify students’ instructional reading levels. Instructional levels refer to texts that are read with 90% to 95% accuracy and that should be the focus of instruction. The percentage of accuracy was calculated by dividing the number of words read correctly by the total number of words read, and multiplying it by 100. The process was as follows. The researcher selected two sets of books leveled 1 to 20 according to Reading Recovery guidelines. Based on students’ initial DIBELS ORF scores, the researcher provided a starting leveled book that approximated their reading ability. Students who read the book at the instructional level were given a second book at that same level for
corroboration purposes. Students who read with an accuracy of more than 95% (independent level) were given upper leveled books until an instructional level was reached. In contrast, students who read the first book with lower than 90% accuracy (frustration level) were given lower leveled books until an instructional level was attained. Again, when students read a leveled book with 90% to 95% accuracy, a second book at the same level was provided to confirm that it was indeed their instructional level. Students’ book levels read in each trial and their percentages of accuracy are reported in Table 3-7.

Table 3-7. Running records results used for grouping purposes

<table>
<thead>
<tr>
<th>Name</th>
<th>Trial 1</th>
<th>Trial 2</th>
<th>Trial 3</th>
<th>Trial 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia</td>
<td>10 (88%)</td>
<td>9 (94%)</td>
<td>9 (93%)</td>
<td></td>
</tr>
<tr>
<td>Pedro</td>
<td>10 (94%)</td>
<td>10 (95%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jessica</td>
<td>10 (92%)</td>
<td>10 (95%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viviana</td>
<td>1 (98%)</td>
<td>2 (90%)</td>
<td>2 (93%)</td>
<td></td>
</tr>
<tr>
<td>Ernesto</td>
<td>1 (98%)</td>
<td>2 (93%)</td>
<td>2 (93%)</td>
<td></td>
</tr>
<tr>
<td>Maggie</td>
<td>5 (88%)</td>
<td>4 (89%)</td>
<td>3 (94%)</td>
<td>3 (91%)</td>
</tr>
<tr>
<td>Maria</td>
<td>1 (98%)</td>
<td>2 (100%)</td>
<td>3 (91%)</td>
<td>3 (93%)</td>
</tr>
<tr>
<td>Jennifer</td>
<td>1 (71%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aldo</td>
<td>1 (&lt;50%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jorge</td>
<td>1 (83%)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For each trial, the number outside the parenthesis refers to the book level read, while the number in parenthesis corresponds to the percentage of reading accuracy. The number of trials varied across students.

Once instructional levels were identified for each student, those with similar reading levels (within one or two levels of difference) were grouped for intervention. A total of three instructional groups were formed. Refer to Table 3-1 for the summary of the composition of these groups.

**Supplemental Pre- and Post-Intervention Instruments**

With the purpose of establishing a comprehensive student reading profile that could help in measuring and interpreting students’ response to the tutoring program, the
researcher conducted pre- and post-intervention measures of reading ability. These included word reading skills, fluency, comprehension, and attitudes toward reading. In addition, teachers were asked to rate their students on five areas of reading and classroom behaviors before and after the intervention. What follows is a detailed description of each measure.

**Test of Word Reading Efficiency (TOWRE).** The TOWRE (Torgesen, Wagner, & Rashotte, 1999) is a norm referenced, individually administered, measure of word reading efficiency that assesses the ability to read printed words with accuracy and fluency. The purposes of this test are to help monitor student growth on phonemic decoding and sight word reading, to identify students who might need more instruction, and to help identify reading disabilities as part of a battery of diagnostic tests. The TOWRE has two subtests: Sight Word Efficiency (SWE) and Phonemic Decoding Efficiency (PDE). The SWE measures the number of real words that can be accurately identified, while the PDE measures the number of nonwords that can be accurately decoded. Each subtests lasts 45 seconds (Torgesen, Wagner, & Rashotte, 1999).

The standardization sample for the TOWRE included 1,500 subjects, ages 6 to 24 years old, from different regions of the country. Alternate-form reliability scores are .93 for the SWE, .94 for the PDE, and .96 for the Total Word Reading Efficiency (Torgesen et al., 1999). In this study, raw scores and percentile ranks for SWE, PDE and Total Word Reading Efficiency were reported.

**Kaufman Test of Educational Achievement-II (KTEA-II) – NWD and LWR.** The KTEA-II (Kaufman & Kaufman, 2004) is a norm referenced, individually administered, measure of academic achievement for individuals between the ages of 4 years, 6
months through 25 years. Two subtests were used in this study: the Nonsense Word Decoding (NWD) and the Letter-Word Recognition (LWR). The NWD requires the student to decode increasingly difficulty nonsense words, while the LWR requires the student to identify letters and decode increasingly difficult real words. Both tests are untimed. It is estimated that the NWD takes 3 minutes and the LWR takes 4 minutes to administer (Kaufman & Kaufman, 2004).

The mean split-half reliability coefficient for the NWD subtest is .94 for grade and age norms. The mean reliability coefficient for the LWR is .97 for age norms and .96 for grade norms (Kaufman & Kaufman, 2004). In this study, raw scores and percentile ranks for both subtests were reported.

**DIBELS Nonsense Word Fluency (NWF) and Oral Reading Fluency (ORF).** Since the DIBELS scores used for screening purposes corresponded to the end of the previous academic year, the researcher was interested in obtaining beginning of year NWF and ORF scores to determine the level of performance before and after intervention. Given that the school discontinued the use of DIBELS assessments, the researcher administered both tests. The NWF is a test of the alphabetic principle and the ability to blend letters into words. The test is individually administered and it takes approximately 2 minutes to complete it. The student is provided with a set of VC and CVC nonsense words in random order. The student is asked to read either individual letter-sounds or whole nonsense words in one minute. Scores represent the number of correct letter-sound correspondences read per minute. The benchmark goal for the beginning and end of second grade is >50 correct letter sound correspondences per minute (Good & Kaminski, 2002).
The ORF is a standardized test of accuracy and rate for reading connected text. The test is individually administered to students with the purpose of identifying those who are in need of additional instruction, as well as to monitor progress. The ORF utilizes a set of standardized grade-leveled passages that the students read aloud for one minute. During this time, an examiner records the number of words read correctly and the number of errors. The test yields a rate of oral reading fluency that corresponds to the number of words read correctly per minute. Passages are available for first grade (middle and end of year), second grade (beginning, middle, and end of year), and third grade (beginning, middle, and end of year). The benchmark goals for the beginning of second grade are >44 correct words per minute. As stated previously, the benchmark goal for the end of second grade is >90 correct words per minute. Test-retest reliability coefficient for the ORF ranges from .92 and .97. Alternate-form reliability for passages within a grade level ranges from .89 to .94 (Tindal, Marston, & Deno, 1983).

At the beginning of the study, each participant was given a passage to read that corresponded to a beginning second grade level (i.e., My Handprints). Students who were at low risk or above average were not given further passages. Students who were at moderate or high risk were given a passage corresponding to the end of first grade (i.e., The Sand Castle). From these, students who still were at moderate or high risk were given a middle of first grade passage (i.e., Ice Cream). A similar process was followed at the end of the study, except that students started reading passages corresponding to the end of second grade (i.e., If I had a Robot). Also, to avoid student fatigue, those who were at moderate risk or high risk on the end of grade passage were first given a beginning second grade passage and if they were at low risk or above
average, then the middle of second grade passage (i.e., Moving Day) was administered. Otherwise, students kept reading first grade passages in the same way described above. This procedure had two purposes: (a) to provide an estimation of the current level of reading fluency of each student, and (b) to serve as a decision making process for selecting passages from the QRI-4 to be administered.

**Qualitative Reading Inventory-4 (QRI-4)-Comprehension.** The QRI-4 (Leslie & Caldwell, 2006) is an informal reading inventory designed to estimate students’ oral and silent reading levels, as well as comprehension skills. The QRI-4 employs narrative and expository passages that span from pre-primer to high school. Comprehension skills for first and second grade are determined through story retell, as well as open-ended questions. Once a student finishes reading a passage, students are asked to retell the story and answer implicit and explicit questions. Scores reported include the total number of ideas recalled (retell) and the total number of correct answers given for each passage.

Based on the total number of correct answers, the QRI-4 provides three different levels at which students comprehend text: independent, instructional, and frustration. According to the tests’ criteria, students at the independent level are able to read the passage successfully without assistance and are able to answer 90% of the questions correctly. Students at the instructional level read passages with assistance and answer 70% of the questions correctly. On the frustration level, students are unable to read the passage and answer less than 70% of the questions correctly. Alternate-form reliability coefficients for the QRI-4 are .80 for comprehension scores on two different passages at the same readability level. Inter-scorer reliability for scoring oral reading miscues is
99%, while reliability for scoring comprehension questions is 98% (Leslie & Caldwell, 2006).

The implementation of QRI-4 passages was contingent on students’ ORF scores. The decision making process was as follows. If a student was at low risk, or above average on any of the second grade passages (beginning, middle, or end of year) of the ORF, a QRI level two passage was administered (i.e., What Can I Get for My Toy?). If a student was at moderate risk or high risk on second grade passages of the ORF, and at low risk or above average on the end of first grade passage, a QRI level one passage (i.e., The Bear and the Rabbit) was administered. Furthermore, if a student was at moderate or high risk on the end of first grade passage from the ORF, and was at low risk or above average on the middle of first grade passage of the ORF, a QRI primer level passage (i.e., Fox and Mouse) was administered. On the other hand, if a student was moderate or high risk on the middle of first grade passage from the ORF, no QRI passage was administered. The purpose of this procedure was to lower students’ frustration when reading text that is beyond their reading abilities.

**Reading Ability Rating Scale (RARS).** The Reading Ability Rating Scale (RARS) for teachers was created by the researcher to obtain information about students’ changes in reading skills and classroom behaviors as a result of the intervention (Appendix C). The checklist has 26 items total, 23 related to reading ability (e.g., phonological awareness, phonics, fluency, comprehension, vocabulary) and three related to classroom behaviors (e.g., participation in class, motivation to read, and use of English to communicate in class). Teachers were asked to rate each of their students before and after the intervention, using a 4-point Likert scale that ranges from very weak to very strong.
to very strong. For each of the five areas of reading, a mean score was calculated and reported. For classroom behaviors, raw scores on each of the three items were reported.

**Elementary Reading Attitude Survey (ERAS).** The ERAS (McKenna & Kear, 1990) is a group or individually administered instrument designed to measure students’ attitudes toward recreational and academic reading (Kazelskis, Thames, & Reeves, 2004). The survey can be used with students from first through sixth grade. According to McKenna and Kear, the survey can be used to monitor the impact of instructional programs on students’ attitudes. The survey has a total of 20 items, 10 related to recreational reading and 10 related to academic reading. With young students, the tutor reads the items together with the students. Students are asked to circle the picture that best describes how they feel about each item. There are four possible pictures that go from very happy to very upset. Approximate completion time is 10 minutes. The survey yields three scores: total for recreational reading, total for academic reading, and a composite total. Scores can range from 10 to 40 points in each scale, and 20 to 80 points for the composite (McKenna & Kear). For this study, raw scores and percentile ranks were reported.

The norming sample consisted of 18,138 students in grades 1 through 6 from different regions of the country. These samples represented a variety of races. Cronbach alpha reliability coefficient for the survey ranged from .74 to .89 across grade levels (McKenna & Kear, 1990).

**Intervention**

The UFLI tutoring program is an early literacy intervention designed to help struggling readers develop beginning reading skills. Originally, UFLI was designed as
an education tool to help prepare pre-service teachers in the area of reading. By conducting one-on-one tutoring with struggling readers, teachers are able to learn about the reading process and how it is acquired by children, the difficulties that many students face when they learn to read, and the instructional methods that help struggling readers overcome their reading difficulties. The tutoring program was founded on current research regarding (a) early literacy development and (b) effective instructional strategies for struggling readers (Lane, Pullen, Hudson, & Konold, 2009). Although UFLI was originally designed to be implemented in a one-on-one setting, several small-group modifications of the tutoring model have been successfully implemented (e.g., Pullen, 2000; Pullen, Lane, Lloyd, Nowak, & Ryals, 2005). The focus of this study was on small-group implementation.

**Early Literacy Components Addressed in UFLI**

Each UFLI tutoring session is designed to promote the development of phonemic awareness, print awareness, decoding, reading fluency, comprehension, and strategy use (Lane et al., 2009). Some of these skills were addressed multiple times throughout the lesson. What follows is a description of how each reading component was addressed in each session.

**Phonemic awareness.** In each tutoring session, phonemic awareness was developed in two ways. First, students were required to count and identify phonemes using Elkoning boxes. Second, they learned to blend and segment phonemes using manipulative letters (Hayes, Lane, & Pullen, 2005; Lane et al., 2009).

**Print awareness.** Print awareness was developed in every lesson through book reading and sentence writing activities. When students read new and familiar books, students were able to handle books, turn pages, and point to different parts of the text.
By doing this, they learned about different parts of the book, reading directionality, and conventions of print (e.g., concept of word, spacing, punctuation). In addition, when students were asked to write a sentence related to the story read, they also practiced directionality, spacing, and punctuation (Hayes et al., 2005; Lane et al., 2009).

**Decoding.** Decoding skills were developed during word work activities with manipulative letters, as well as reading and writing practice. In word work activities, students were required to manipulate letters in order to encode and decode real and nonsense words at the onset-rime and phoneme levels. During reading practice, students were required to decode new and unfamiliar words while repeatedly reading familiar books and while reading new and unfamiliar books for the first time. During writing practice, students were asked to identify the phonemes in words, to encode the words using Elkonin boxes, and rewrite words on a sentence page. With ample opportunities for practice, UFLI promoted decoding accuracy and automaticity (Hayes et al., 2005; Lane et al., 2009).

**Fluency.** Fluency was primarily developed by repeated readings of connected text. Students reread familiar books at an independent reading level (more than a 95% accuracy). In the beginning, the focus of the tutoring was on developing reading accuracy. Once students became more accurate while reading connected text, the focus shifted to reading automaticity. Finally, when students acquired appropriate reading automaticity the focus of the sessions shifted to prosody (Hayes et al., 2005; Lane et al., 2009).

**Comprehension.** Comprehension skills were developed before, during, and after reading connected text. Before the students read a new book, the tutor introduced the
book and engaged the group in a picture walk with the goal of activating prior knowledge and creating context for the story. Then, students were encouraged to make connections and predictions related to the story. During reading, the tutor modeled and guided students to self-monitor for comprehension. After reading, the tutor and students engaged in a discussion of the story through the use of literal, inferential, and evaluative questions. Children were also asked to summarize part of the story and then write a summary sentence (Hayes et al., 2005; Lane et al., 2005).

**Strategy use.** Throughout the UFLI tutoring program, students acquired different reading strategies to identify words and check for accuracy. Strategies taught included use of grapho-phonemic information, semantic and syntactic cues to confirm decoding accuracy, monitoring, cross-checking, and self-correcting, among others. In addition, the tutor scaffolded the use of strategies by using the “ABC” mnemonic, which stands for “Acquire, Build, Control.” First, the tutor demonstrated and modeled the use of a new reading strategy that students needed to “acquire.” Then, as students “built” their strategy repertoire, the tutor prompted students to use specific strategies. Finally, once children had “control” over the strategies, the tutor observed how students applied them to connected text and asked them to explain how they were able to figure out specific words. It was expected that students who were able to select appropriate strategies without prompting and explain accurately how the strategies worked would be able to use them independently (Hayes et al., 2005; Lane et al., 2009).

**Effective Instructional Practices for ELLs**

The UFLI tutoring program included research-based instructional practices that facilitate learning among English language learners. These were (a) explicit and systematic instruction (Gersten & Geva, 2003; Helman, 2009; Manyak & Bauer, 2008;
Vaughn et al., 2006), (b) small-group instruction (Gersten et al., 2007), (c) ample opportunities for practice (Gersten & Geva, 2003), (d) assessment of students’ progress (Gersten & Geva, 2003; Helman, 2009), (e) interactive teaching (Gersten & Geva, 2003), (f) modeling (Helman, 2009), (g) integration of vocabulary into reading instruction (Antunez, 2002; Helman, 2009), (h) use of visuals (Gersten & Baker, 2000; Helman & Burns, 2008), (i) connection between oral and written forms of words (Helman & Burns, 2008), (j) self-monitoring (Helman & Burns, 2008), and (K) use of native language strategically (Gersten & Baker, 2000).

UFLI Sessions

The tutoring sessions were designed based on the small-group UFLI model by Lane, Pullen, and Hayes (2007) and modified for second grade English language learners. Each session had four steps: (a) gaining fluency and measuring progress, (b) word work with manipulative letters, (c) introducing and reading a new book, and (d) writing for reading. The instructor followed a session guide that outlined each step (Appendix D). Each session had an accompanying session notes sheet to be completed by the tutor (Appendix E). What follows is a brief description of each step, including modifications for ELLs made for the study.

Step 1 – Gaining fluency and measuring progress (10 minutes). The purpose of this step was twofold: (a) to develop reading fluency of connected text, and (b) to measure students’ reading progress. Fluency was developed by targeting word reading accuracy and automaticity, reading rate, and prosody. Students reread one to three books that had been read in previous sessions and that could be read by all group participants with 90% to 100% accuracy. Each student read at least one book (choral reading, partner reading), with minimal tutor assistance. Books selected for this step
provided opportunities to practice decoding, sight word reading, as well as improve reading rate. Books that were too easy were not selected because they did not offer instructional value. As students reached appropriate levels of accuracy and rate, the tutor shifted the focus to prosody.

During progress monitoring, the tutor took a running record of one group member. The student was asked to read the new book that was introduced in the previous session, while the other group members were reading familiar books. The running record served two purposes: (a) to determine the level for the new book to be read in step 3, and (b) to plan for instruction. To determine the new book level, the tutor calculated the rate of accuracy (total words read correctly/total words read x 100). If the accuracy rate was below 90% (frustration level), the tutor decided whether to introduce a new book at the previous level or try a new one at the same level. If the accuracy rate was between 90% and 95% (instructional level), the tutor introduced a new book at the same level. If the accuracy rate was above 95% (independent level), the tutor introduced a new book at a higher level. To plan for instruction, the tutor examined the student’s miscues (e.g., attempts, omissions, self-corrections, additions, repetitions, emerging patterns) and strategy use. Immediately after, the tutor provided feedback on student’s use of reading strategies to help them develop awareness of how strategies were being used. When appropriate, the tutor asked the student to identify strategies that were used to figure out challenging words (Lane et al., 2001; Lane et al., 2005). Throughout the first step, the tutor supported the language needs of students by relying on visuals and by providing quick definitions of unfamiliar words (Gersten & Baker, 2000).
**Step 2 – Word work with manipulative letters (10 minutes).** The purpose of this step was to develop an understanding of the alphabetic principle, as well as automatic word recognition skills. In this step, manipulative letters were used to conduct word work with new and familiar words. The tutor and each participant had a magnetic board and a set of magnetic letters. Students practiced encoding and decoding real and nonsense words, at the onset-rime and phoneme level. When needed, the tutor pointed out the similarities and differences between Spanish and English sounds and word patterns (Linan-Thompson et al., 2003). The tutor planned ahead of time by selecting a known word from a familiar book, and then creating a list of real words and nonsense words that could be derived from manipulating the known word. The list of words followed a sound sequence that moved from easier to difficult (e.g., continuous sounds in initial position before stop sounds).

The process was as follows. First, the tutor either pointed out the familiar word in the book or asked students to find it. Then, the tutor asked students to either spell the word or read the word that was spelled with magnetic letters on their own boards. Next, the tutor prompted students to either encode or decode each of the words in the list by making changes to the onset-rime or phonemes in the word. To address the needs of ELLs, the tutor specified whether each word was a real word or a nonsense word. This was important because many ELLs were still building their vocabularies and were not able to distinguish between real and nonsense words (Linan-Thompson et al., 2003).

In addition, vocabulary was supported through the use of picture cards, brief definitions, and in some instances, translation of key words. This was relevant given that vocabulary is one of the biggest challenges ELLs face (Carlo et al., 2004). As
students acquired word reading strategies, the tutor introduced more complex spellings, including prefixes, suffixes, and other morphographic features (Lane et al., 2001; Lane et al., 2009).

**Step 3 – Introducing and reading a new book (10 minutes).** The purpose of this step was to learn and practice reading strategies with progressively more challenging books. The tutor selected a book based on the rate of accuracy obtained during the running record. Then, the tutor introduced the book to the students with a picture walk and a discussion that highlighted key vocabulary words, unusual spellings, and/or repeated language patterns. Picture cards and quick definitions were used to support vocabulary development. In addition, students were encouraged to make connections to their personal lives, as well as predictions about the story, which were later confirmed or refuted. This provided participating ELLs with opportunities to practice oral skills and acquired vocabulary while learning comprehension strategies. After a brief discussion, students started to read the book while the tutor coached them in learning and applying reading strategies. Coaching was more explicit at the beginning when students were learning new strategies and became more implicit when the students started acquiring and demonstrating control over them (Lane et al., 2007; Lane et al., 2009).

In addition to reading connected text, the tutor engaged the students in word work with new words. Students were prompted to apply different reading strategies to figure out unknown words. To do this, the tutor selected one or two words that students struggled with when reading the new book. The tutor used manipulative letters or dry-erase boards to (a) demonstrate how the new words were spelled, (b) point out similarities and differences between new words and familiar words, (c) use parts of the
new words as base for practicing word families, (d) practice segmenting and blending using Elkonin boxes, or (e) practice writing multisyllabic words and/or sight words (Lane et al., 2007; Lane et al., 2009). As in previous word work activities, visuals and brief definitions were used to support the vocabulary needs of students.

**Step 4 – Writing for reading (15 minutes).** The purpose of this step was to use writing as a means to develop print awareness, phonemic awareness, decoding, and encoding automaticity, and familiarity with sight words and word patterns. First, the tutor had a brief informal conversation with the students about the new book read. During the conversation, the tutor identified one or two meaningful sentences from each participant that provided optimal opportunities for instruction. The tutor jotted down one sentence for each student on the session notes sheet. Each sentence included at least one to three high frequency words and at least two to four decodable words. The tutor then asked the students to write their sentences in their writing books. Each writing book, formed of blank sheets of white paper, was turned sideways in order to have a top page for “word work” and a bottom page for sentence writing. Initially, the students wrote their sentence on the top page, while the tutor moved from one student to the other checking for spelling accuracy. As students finished writing their sentences, the tutor asked them to either write words that were spelled correctly in the sentence page, or do word work on the top page with words that were misspelled.

Word work was conducted in different ways: (a) unfamiliar high frequency words with uncommon spellings (e.g., because, was) were spelled by the tutor first and then written multiple times by the students (i.e., write the word inside this box, write the word as large as you can, write the word as small as you can, write the word as fast as you
can), and (b) unfamiliar words with regular spelling patterns were practiced with Elkonin boxes first and then rewritten once again before writing it on the sentence page. Uncommon words with unusual spellings were dealt with in one of three ways: (a) the tutor wrote the word on the sentence page, (b) the tutor first wrote the word on the practice page and then the student wrote it on the sentence page, or (c) the tutor helped the student identify parts of the words he or she could spell and completed the word for the student before the student wrote it on the sentence page (Lane et al., 2007; Lane et al., 2009).

Word work was conducted individually or as a group if every student was working on the same word. Every time a word was added to the sentence page, the child was required to reread what he or she had written to that point. This provided additional reading practice and reinforced grapho-phonemic connections. To support the needs of ELLs, the tutor helped students produce complete and grammatically correct sentences by reinstating what the students had said and making them repeat the complete sentence before writing it. In some instances, when students used words in Spanish to express an idea, the tutor translated the word for the student and asked them to repeat the word verbally, before writing it.

Materials

Based on the UFLI tutoring program, all participating groups had access to the same type of materials. These materials were provided by the investigator at no cost to the school or the students. Materials included (a) leveled books, (b) magnetic letters and magnetic boards, (c) picture cards, and (d) other materials.

Leveled books. The books selected for each lesson followed the Reading Recovery level criteria, which are designed to span from level 1 to level 20. Levels 1 to
16 correspond to first grade, and levels 17 to 20 correspond to second grade. Leveled books match the text to the specific needs of readers (Lane et al., 2009), allowing them to practice decoding skills and sight word reading (Helman, 2009), and to apply reading strategies (Fountas & Pinnell, 1999). Within each reading level, narrative and informational texts that covered a variety of topics were selected to support students’ interests and backgrounds.

**Magnetic letters and magnetic boards.** Each student had a set of solid blue, lowercase magnetic letters and a magnetic board to manipulate during word work activities. Research shows that the use of magnetic letters supports the development of decoding skills. For example, Pullen (2000) studied the effect of alphabetic word work using manipulative letters on the reading skills of first grade struggling readers. Results showed that students in the experimental group (lessons with manipulative letters) had better decoding skills than students in the comparison condition (lessons without manipulative letters) and students in the control group (no treatment). In a different study, Pullen and colleagues (2005) conducted a multiple-baseline design across groups study to evaluate the use of manipulative letters during explicit decoding instruction. Students used magnetic letters to blend and segment, decode and recode target words from books previously read. The authors found that all participating students (N=9) increased the percentage of correct pseudowords read per minute, from baseline (average of 46.5%) to intervention (average of 86.5%). These findings offer additional evidence for the use of manipulative letters to during reading interventions that target word reading skills.
**Picture cards.** With the purpose of facilitating comprehension throughout the tutoring lessons, picture cards of key vocabulary words were used to help students gain understanding during reading and word work activities. Sets of picture cards were either purchased or created by the researcher. According to Gersten and Baker (2000), visual aids help students “visualize the abstractions of language” (p. 463). Therefore, they can effectively support English language learners as they deal with the language demands of each lesson.

**Other materials.** In each tutoring session, three additional materials were required. First, session notes for each group to keep a detailed record of their performance. Second, a sentence writing book was given to each participant to complete step 4 of the lesson. And third, pencils and a digital timer to ensure that adequate time was spent on each activity.

**Dependent Variable**

Two dependent variables were selected and measured throughout the different phases of this study. The variables were (a) rate of correct pseudowords read per minute (CPPM) and (b) rate of correct sight words read per minute (CSPM). Pseudoword reading, also known as nonsense word reading or nonword reading, has long been identified as a reliable predictor of reading achievement (Gough, 1983). Shankweiler and colleagues (1999) examined the relation between word reading, nonword reading, and reading comprehension. Findings showed that there is a strong relation between word and nonword reading and between these skills and reading comprehension. According to Shankweiler and colleagues, nonword reading measures require the use of “phonologically analytic decoding processes,” which are critical to reading ability (p. 87). Pullen and colleagues (2005) also state that using a rate of
pseudoword reading enables us to determine the level of automaticity with which readers decode words, that is, decoding fluency (Hudson et al., 2009). The rate of correct pseudowords read per minute (CPPM) was used in this study to make decisions about movement across phases (baseline, intervention, maintenance).

In addition to pseudowords, the rate of correct sight words read per minute (CSPM) was monitored throughout the intervention to measure the development of word recognition skills. According to Ehri (2005b), a useful way in which readers might read a word is by sight or memory. A word that is well known can be recognized automatically, as a single unit, allowing the reader’s attention to be focused on meaning while reading connected text (Ehri, 2005b; Ehri & Snowling, 2004, LaBerge & Samuels, 1974). Sight words are learned by establishing connections between the graphemes and phonemes in words. These connections are based on knowledge of the alphabetic principle and spelling patterns, which is developing in beginning readers. Each time a word is read, the grapheme-phoneme connections are strengthened (Ehri, 2005b). According to Ehri and Snowling (2004), having an extensive sight word lexicon is central to reading. Therefore, measuring students’ ability to read sight words accurately and fluently is key in evaluating the effectiveness of beginning reading interventions like UFLI. For the purposes of this study, sight words are defined as high-frequency words with irregular spelling patterns.

To measure the dependent variables, two types of probes were created by the researcher: (a) pseudoword probes and (b) sight word probes. Pseudoword probes were created from a pool of 100 words that represent common letter-sound combinations and spelling patterns. From this pool of words, 15 different probes of 50
words each were generated by random selection in order to prevent practice effects (see Appendix F for all pseudoword probes). In a similar fashion, 15 sight word probes were created from a pool of 100 high frequency words selected from Dolch’s list of high frequency words for first and second grade. Each probe consisted of 50 randomly selected sight words (see Appendix G for all sight word probes). To estimate the rate of CPPM and CSPM, the researcher conducted 1-minute timings with each participant every other day. No feedback was provided to the students at this time. The rate of CPPM and CSPM corresponded to the total number of words read correctly in one minute.

**Design**

This study implemented a multiple baseline across groups design (Kazdin, 1982; Kennedy, 2005) to assess the effects of the UFLI program on the reading skills of second grade, Spanish-speaking, English language learners. Single-subject designs are relevant to the field of literacy for various reasons: (a) they emphasize the individual as the unit of concern; (b) they systematically determine if a specific intervention is effective and for whom it is effective, allowing the analysis of “responders” and “nonresponders” to treatment; (c) they provide a practical way to test educational procedures under typical educational conditions; (d) they incorporate ways to assess not only the outcomes of an intervention, but also the process of change and the maintenance of change across time, and (e) they offer a cost- and time-efficient way to investigate critical instructional questions (Horner et al., 2005; Neuman & McCormick, 2000).

In 2003, single-subject research was identified by the Division of Research of the Council for Exceptional Children as one of the four research methodologies needed to
identify evidence-based practices (Odom et al., 2005). Through the use of within- and between- subject comparisons and systematic replication, single-subject design offers ways to control for major threats to external and internal validity, a major concern for research in general (Horner et al., 2005).

The design for this study consists of three phases: (1) baseline, (2) intervention, and (3) maintenance. A detailed description of each phase and the tutor/researcher that conducted each phase is provided below. Following that, procedural information is given on supplemental data collection.

**Baseline**

During baseline, the dependent variables (CPPM and CSPM) were measured for each participant using researcher created probes. Each data collection session lasted approximately three minutes per student. Once individual rates were calculated, a mean group was estimated and plotted into a graph. All groups started baseline at the same time. When Group 1 showed a stable line on six continuous data points (no significant increasing or decreasing trend in behavior), they moved to the intervention phase. In the meantime, the other two groups remained in baseline.

**Intervention**

During intervention, each group participated in a series of 45-minute, small-group tutoring lessons, two to five times a week. Lessons for each group were scheduled in collaboration with the students’ teachers and the school principal to avoid interfering with important instructional time. All lessons took place in a quiet and well illuminated room to avoid distractions. Each session followed a structured format that involved the four steps described previously. In each tutoring lesson, students read familiar and new leveled books, did word work with magnetic letters, and wrote sentences related to the
readings. During this phase, response to intervention was measured using the same set of pseudoword and sight word reading probes and following the same procedure as in baseline. Data were collected for each participant at the beginning of the tutoring session (6 to 10 minutes per group). According to Pullen et al. (2005), administering probes at the beginning of a session is a more accurate measure since it reduces the chance of students applying what they had just practiced during the lesson. While one group member completed the probes, the other group members sat on the other side of the room and read familiar books. After each individual rate was established, a group mean was calculated and plotted into a graph.

When Group 1 showed an increase in the rate of CPPM on four consecutive data points, Group 2 started the intervention phase. In the meantime, Group 3 remained on baseline. When Group 2 showed an increase on four consecutive data points, Group 3 started intervention. Each group remained in the intervention phase until (a) every member of the group was reading at grade level (level 20 books) or (b) when every member of the group completed a minimum of 40 tutoring lessons.

**Maintenance**

The maintenance phase began for each group two weeks after the intervention phase ended. The same data collection procedures as in baseline were followed. Each data collection session lasted approximately three minutes per student. Once individual rates were established, a group mean was calculated and plotted into a graph. The maintenance phase ended for each group when data points showed that a stable line was achieved, indicating that they were still reading at an appropriate reading level. The total number of data points varied across groups: Group 1 had 5 data points, while Group 2 and 3 had a total of 6 data points.
**Tutor/Researcher**

The researcher conducted all the tutoring sessions. She was trained in the UFLI program by the program’s developer and had experience implementing it with Spanish-speaking English language learners, in one-on-one and small-group formats. The researcher was originally from Guatemala and had a Mexican heritage as well. She was a native speaker of Spanish and spoke English fluently. The tutor had a B.A. in Psychology and Master of Education and Education Specialist degrees in Counselor Education. At the time of the study, the tutor was a doctoral candidate in Special Education. Her areas of expertise were early literacy, early reading difficulties, and English language learners.

**Data Analysis**

Data collected in each phase were analyzed using “systematic visual comparison of responding within and across conditions” (Horner et al., 2005, p. 169). In visual analysis, data points are graphed in order to explore and observe the types of patterns that arise over time (Kennedy, 2005). Visual comparison of data points allowed the researcher to identify changes in the dependent variable as a function of the independent variable (UFLI tutoring program).

According to Horner et al. (2005), when the research participant is a group, and not an individual, the group generates a single score for each measurement period. In this study, mean rates of CPPM and CSPM were calculated for each group based on each member’s individual score. The group mean was plotted in a noncumulative way using a simple line graph (Kazdin, 1982). Data were then analyzed by estimating an overall mean for each phase and conducting within group comparisons across phases.
Supplemental Data

Supplemental data include pre- and post-intervention measures of early literacy skills and attitudes toward reading, teachers’ ratings of students reading abilities and classroom behaviors. It also addresses book levels read by each group throughout the intervention phase. What follows is a brief description of the procedures followed for each of these.

Pre- and Post- Intervention Data

At the beginning of the study, before baseline data were collected, all students were assessed individually on measures of early literacy skills and attitudes toward reading. At the end of the study, when the maintenance phase was completed for all groups, students’ early literacy skills and attitudes toward reading were assessed again. Assessment times were scheduled with the help of the students’ teachers and the school principal. Pre-intervention assessment lasted approximately three hours per student, while post-intervention assessment lasted approximately 90 minutes. The time varied from pre- to post-intervention because, at the beginning of the study, the Woodcock-Munoz Language Survey-Revised (WMLS-R) was administered for screening purposes. Assessment sessions took place at the school and were completed in multiple sittings to accommodate the needs of young children and to avoid fatigue.

Assessment at the beginning of the study was completed by the investigator and three graduate students from the University of Florida. The three graduate assistants were also fluent in English and Spanish and had background knowledge of reading, second-language learning, and educational assessment. They were pursuing graduate studies in School Psychology, and were familiar with a few of the assessments used in this study. The investigator provided one 2-hour training session where trainees were
able to learn about the assessments procedures and to practice implementing them. Assessment at the end of the study was completed only by the researcher, given that time requirements were less demanding since the WMLS-R was not administered at that time.

In addition to directly measuring students’ early literacy skills, teachers were also asked to complete a reading behavior rating scale to measure students’ changes as a result of the intervention. The scale addressed five areas of reading (i.e., phonemic awareness, phonics, fluency, comprehension, and vocabulary), as well as classroom behaviors (i.e., participation in class, motivation to read, and use of English to communicate in class). Each teacher received a rating scale before the study started and one at the culmination of the study.

**Book Levels during Intervention**

During intervention, data were collected for each group regarding the changes in book levels read throughout the tutoring lessons. These data were then plotted into a graph for visual analysis. The graph depicts the starting reading level for each group, the number of lessons that each group remained at each reading level, and the level reached at the end of the intervention. This data provided additional information on the effectiveness of the intervention.

**Interobserver Agreement**

To ensure that the dependent variables (CPPM and CSPM) were measured and recorded with integrity, interobserver agreements (IOA) were established between the tutor and an observer. The tutor and observer listened to students’ reading of pseudowords and sight words probes during one-minute timings. Independently, the tutor and the observer recorded the number of words read correctly and calculate the
rate of accuracy. To calculate the level of agreement, a frequency-ratio approach was used. In this approach, the researcher calculated the total number of responses that each observer recorded. Then, the smaller total of responses (S) was divided by the larger total of responses (L) and then was multiplied by 100 (S/L x 100). An acceptable level of agreement is 80% (Kazdin, 1982; Kennedy, 2005). The level of agreement for all pseudoword observations was 93.8% and for sight word observations was 98.40%. These levels of agreement were based on a total of five observations for pseudoword and sight words conducted for each group: one during baseline, three during intervention, and one during maintenance. The only exception was an additional observation conducted with one student in Group 1. On that occasion, Amelia was absent and Pedro was not able to speak out loud due to illness. An IOA was conducted based on only one student.

**Treatment Integrity**

Several measures were taken to ensure that the tutoring program was implemented in a reliable manner. First, during each lesson the tutor had a copy of the session guide that outlined each of the four steps. The session notes sheets also served as an additional guide for the tutor since they outlined each of the steps in the lesson. Second, the tutor conducted self-evaluations using a treatment fidelity checklist (Appendix H). One checklist was completed every week for each of the participating groups. For Group 1 a total of 11 checklists were completed. The mean percentage of adherence was 97.45%. For Group 2, 14 checklists were completed with a mean percentage of adherence of 96.6%. For group 3, a total of 13 checklists were completed. The mean percentage of adherence was 96.2%.
Third, the tutor’s adherence to the program was evaluated by one of two observers, who completed a treatment fidelity checklist on each visit. The tutor was observed two times with each group. Observer 1, a professor from the University of Florida who developed the UFLI tutoring program completed two observations. Observer 2, a doctoral student in Special Education at the University of Florida and experienced UFLI tutor, completed four observations. After each session, the observer and the tutor met to discuss the integrity of the intervention. The researcher then calculated the percentage of adherence by dividing the total number of items completed by the total number of lesson components and multiplying it by 100. The mean adherence percentage for all six observations was 96%. Adherence percentage for each treatment integrity observation is reported in Table 3-8.

Table 3-8. Treatment integrity

<table>
<thead>
<tr>
<th>Group number</th>
<th>Observation number</th>
<th>Number of items completed</th>
<th>Percentage of adherence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>39/42</td>
<td>93%</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>40/42</td>
<td>95%</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>41/42</td>
<td>98%</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>41/42</td>
<td>98%</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>40/42</td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>40/42</td>
<td>95%</td>
</tr>
</tbody>
</table>

Social Validity

Social validity is defined by Kennedy (2005) as the “estimation of the importance, effectiveness, appropriateness, and/or satisfaction various people experience in relation to a particular intervention” (p. 219). This is especially important in educational settings because it gives the researcher an indication of the level of acceptability of the intervention among its “consumers” (p. 218). To estimate social validity, a subjective evaluation approach (subjective evaluation) was conducted to obtain feedback from
students and teachers about the effectiveness and the acceptability of the intervention (Kennedy, 2005).

First, each student participated in a brief interview at the end of the maintenance phase. Questions focused on students’ opinions about the UFLI tutoring lesson and its components. Each interview took approximately five minutes to be completed. Second, all the teachers of the participating students were invited to observe a videotaped tutoring lesson and complete a social validity questionnaire. The goal of the questionnaire was to evaluate the acceptability of the tutoring program and its components and to determine whether teachers would see themselves using this lesson or any of its components in their classrooms. The questionnaire was adapted from Pullen (2000) to address the UFLI program components as it relates to ELLs. A copy of the students’ interview questions and the teachers’ questionnaire can be found in Appendix I.

The researcher sent home consent forms asking parents for permission to videotape their children during a tutoring lesson (see Appendix A). A total of five students received parental consent to participate in the video, three from Group 2 (Maggie, Maria, and Viviana) and two from Group 3 (Aldo and Jennifer). Because of scheduling difficulties, one student from Group 2 (Viviana) and two students from Group 3 (Jennifer and Aldo) were selected to participate. Once the videotape was completed, teachers watched the tape and were asked to complete the questionnaires. Teachers were provided a copy of the lesson guide to help them identify the different steps of the program as they observed the video. Due to time constraints, teachers opted to complete the questionnaire at a later time. The response rate was 100%.
Delimitations and Limitations

There were several delimitations and limitations to the study. First, delimitations and their impact on external validity are addressed. Second, the study’s limitations are described as well as how each may have influenced the findings and their generalizability.

Delimitations

The first delimitation pertains to the group of students selected to participate. All students were in second-grade and all spoke Spanish as their first language. This may limit the generalization of findings to other grade levels and other groups of ELLs that might speak another language at home.

A second delimitation is related to the particular setting in which the program was implemented. This study was conducted in only one school located in a rural area of North Florida. This particular setting has a set of variables that may differ from other schools (e.g., student population, human resources, instructional resources, scheduling) and these variables may have influenced intervention effects in some way (Kazdin, 1982). For example, the school's schedule allowed for daily 45-minute sessions that facilitated the provision of the UFLI program to all groups for an extended period of time. While the number of weekly sessions varied across groups due to school activities that conflicted with the established schedule, the length of the intervention was extended until students reached grade level reading or until they completed a minimum of 40 tutoring sessions. Also, since the school serves all second and third grade students in the county, there was a sufficient number of Spanish-speaking ELLs in second-grade to group second graders appropriately by reading level. This might not be the case in other
schools, where there may be a smaller number of ELLs. Changing group composition could influence the efficacy of the UFLI program and could alter the results.

A third delimitation is related to the tutor implementing the intervention. In this study, the intervention was conducted only by the researcher. According to Kazdin (1982), there is a possibility that the characteristics of the individual implementing the intervention may help attain the intervention effects. In this case, the researcher shared a similar heritage with the majority of the participants, was proficient in English and Spanish, had extensive knowledge about the reading process and literacy development among ELLs, and had experience implementing the UFLI program with Spanish-speaking ELLs. It is unknown at this point if similar intervention effects can be attained if the UFLI program is implemented with ELLs by other tutors with different sets of characteristics, knowledge, and skills.

Limitations

The first limitation is inherent to single-subject design and pertains to sample size. One of the main criticisms against this methodology is that the results of a particular study may not be generalized to larger groups of subjects due to the limited sample size (Kazdin, 1982; Neuman & McCormick, 1995). To increase the external validity of results, direct and systematic replication is necessary.

The second limitation is related to treatment interference. In this study, students were participating in the SRA Early Reading Intervention (ERI) program and/or Harcourt Interventions while the study took place. While the use of a multiple baseline design was used to establish control across groups, it is unknown to what degree their participation in other programs might have influenced the results.
Description of One-on-One Tutoring Methodology

For the student that received one-on-one tutoring (Miriam – pseudonym), data were collected on rates of CPPM and CSPM during baseline, intervention, and maintenance. Pre- and post-intervention data were collected using the same assessment instruments implemented with the other participants. Running record trials at the beginning of the study showed that she was reading level 6 books at an instructional level. Table 3-9 shows the rate of accuracy in each running record. What follows is a brief description Miriam’s demographic data, instructional information, reading scores used for selection, language levels, and classroom behaviors.

Table 3-9. Running records results used for Miriam

<table>
<thead>
<tr>
<th>Student</th>
<th>Trial 1</th>
<th>Trial 2</th>
<th>Trial 3</th>
<th>Trial 4</th>
<th>Trial 5</th>
<th>Trial 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Miriam</td>
<td>10 (85%)</td>
<td>9 (88%)</td>
<td>8 (89%)</td>
<td>7 (83%)</td>
<td>6 (92%)</td>
<td>6 (93%)</td>
</tr>
</tbody>
</table>

Miriam was a Hispanic female, aged 7 years-11 months, enrolled in second grade for the first time. Her parents were from Mexico and they only spoke Spanish at home. Her mother reported not finishing high school. Her mother stated that Miriam had had four years of instruction in the US. As part of her daily reading instruction, she received the SRA/EIR program in small groups, five times a week, for 45 minutes. School records showed that Miriam had an LEP status, but did not receive LEP classes.

Reading scores showed that, at the end of first grade, Miriam scored in the 46th percentile on the SAT-10. Her DIBELS scores for the end of first grade were 50 on PSF (low risk), 36 on NWF (moderate risk), and 27 on ORF (moderate risk). At the beginning of second grade, she scored between the 10th and 20th percentile on the Invented Spelling Assessment. Language scores on the WMLS-R demonstrated that she had limited to fluent English oral language ability (Level 3.5) and limited Spanish oral
language ability (Level 3). On the C-ATRS, her teacher reported that Miriam had no attitude or behavior problems in class. She affirmed that Miriam was a “very easy-going student” and that she was “almost always focused on her work.”

The student received the UFLI individual tutoring program, which follows the same principles and addresses the same reading skills as the group program, but follows a different lesson format. In each lesson, a fifth step is included, which focuses on extending literacy practices by exposing students to different types of reading genre. An outline of the steps for one-on-one UFLI tutoring can be found in Appendix J.

**Pilot Study**

A pilot study was conducted prior to this research study with the purpose of evaluating the effectiveness of the UFLI tutoring program on the reading skills of Spanish-speaking English language learners, who were experiencing reading difficulties. In the pilot study, a multiple baseline across participants design was implemented with a total of three first-grade students. The participants were selected based on their English language learner status and their “at-risk” reading status as determined by DIBELS scores. The experimental procedures (movement across phases) were similar to the ones described in this study. The dependent variable was the rate of correct pseudowords read per minute (CPPM), using progress monitoring probes from DIBELS. The tutoring lessons had all the components addressed in this study plus the addition of a fifth step that focused on extending literacy practices. In that step, students were exposed to different types of reading genre with the goal of increasing awareness of different text structures (Lane et al., 2009).

Students participated in an average of 22 tutoring lessons, 4 to 5 days a week. Each lesson lasted approximately 45 minutes. Analysis of data showed that all students
made a marked improvement by the end of the intervention. Student A went from a total of 4 CPPM during baseline to 24 CPPM at the end of the intervention. Student A also improved on book levels read, going from level 3 to level 10 in 27 sessions. Student B went from a total of 10 CPPM during baseline to 34 CPPM at the end of the intervention. In book reading, she went from level 3 to level 17 in only 16 sessions. Student C went from 1 CPPM to 9 CPPM after intervention, and from a level 1 books to a level 5 in 25 sessions.

Students in the pilot study varied in their initial level of oral language proficiency based the WMLS-R CALP levels. Student A and B demonstrated limited English oral proficiency (Level 3), while student C demonstrated very limited English oral proficiency (Level 2). Regardless of the level of English oral proficiency, all students responded to the intervention, a finding that was also reported in studies conducted by Gunn et al. (2000; 2002; 2005), and Linan-Thompson et al. (2003).

As a result of the pilot study, and in agreement with other research studies (Linan-Thompson et al., 2003; Mohr & Mohr, 2007) a few modifications were made to the UFLI tutoring program to address the language needs of English language learners. First, picture cards and quick definitions were used to clarify unfamiliar words during reading and word work activities. Second, real words and nonsense words were identified during decoding and encoding activities to help students make connections between written words and their meaning. Finally, complete sentences and standard grammar were modeled by the tutor to help students express complete ideas.
CHAPTER 4
RESULTS

The purpose of this study was to evaluate the effectiveness of a modified version of the University of Florida Literacy Initiative small group tutoring program on the reading skills of second grade Spanish-speaking English language learners who are struggling to read. For this purpose, a multiple baseline across groups design was implemented to measure students’ response to intervention. The goal of this chapter is to present the results obtained throughout the study. The chapter is divided in several sections: (a) dependent variables, (b) total number of tutoring sessions (c) supplemental data, (d) social validity, (e) summary of one-on-one tutoring data, and (f) summary of findings.

Dependent Variables

Throughout the three phases of the study, CPPM and CSPM data were collected using researcher-created probes. After each probe was implemented, the rate of CPPM and CSPM was first calculated for each group member. A few students (i.e., Amelia, Pedro, Jessica, and Maggie) completed some of the CSPM probes within one minute. On those occasions, the time remaining was recorded and then used to estimate what the actual number of correct sight words per minute would have been if students had continued reading for the full minute.

Once individual rates of CPPM and CSPM were calculated, a group mean was estimated and plotted into a graph. At the end of each phase, overall mean rates of CPPM and CSPM were calculated for each group. Decisions about movement from one phase to the next were made based on each group’s rate of CPPM.
Results for the two dependent variables are organized by phases: (a) baseline, (b) intervention, and (c) maintenance. In each phase, group data are reported, including the range of mean scores and the overall mean for the entire phase. In addition, the difference in overall means between baseline and intervention, as well as between intervention and maintenance are reported. Individual data can be found in Tables 4-1 to 4-3.

**Baseline Phase**

During baseline, the rate of CPPM and CSPM were calculated until a stable line of response was established for each group. Each data session lasted approximately 6 to 10 minutes per group. Individual data is presented in Table 4-1.

**Group 1 data.** The mean rate of correct pseudowords read per minute for Group 1 ranged from 6 to 7 CPPM with an overall phase mean of 6.33 CPPM. The mean rate of sight words ranged from 48.67 to 52.39 CSPM, with an overall phase mean of 50.82 CSPM. Data were collected during a total of six baseline sessions.

**Group 2 data.** The mean rate of pseudoword reading for Group 2 ranged from 4.25 to 5 CPPM, with an overall phase mean of 4.75 CPPM. The mean rate of sight words ranged from 22.5 to 24.3 CPPM, with an overall mean of 23.82 CSPM. Data were collected over a total of seven sessions.

**Group 3 data.** The mean rate of correct pseudowords read per minute for Group 3 ranged from 1.66 to 3 CPPM, with a phase mean score of 2.42 CPPM. For sight word reading, the mean ranged from 1.7 to 3.7 CSPM, with an overall phase mean of 2.63 CSPM. Data were collected over 11 sessions.

**Summary.** During baseline, all groups displayed no significant increase or decrease in the trend of response for CPPM or CSPM. Baseline levels differed across
groups. Group 1 had the highest baseline rates for both variables, followed by Group 2 and Group 3. The difference across groups for CPPM was smaller than for CSPM. Between Group 1 and Group 2, there was a difference of 1.58 CPPM, compared to a difference of 27 CSPM. Similarly, between Group 2 and Group 3 there was a difference of 2.33 CPPM, compared to 21.19 CSPM.

<table>
<thead>
<tr>
<th>Participants</th>
<th>CPPM Range</th>
<th>CPPM Mean</th>
<th>CSPM Range</th>
<th>CSPM Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia</td>
<td>12-15</td>
<td>13.5</td>
<td>62.72-68.18</td>
<td>66.35</td>
</tr>
<tr>
<td>Pedro</td>
<td>1-3</td>
<td>1</td>
<td>49.41-55</td>
<td>52.80</td>
</tr>
<tr>
<td>Jessica</td>
<td>3-5</td>
<td>3.83</td>
<td>32-34</td>
<td>33.33</td>
</tr>
<tr>
<td>Viviana</td>
<td>1-2</td>
<td>1.57</td>
<td>12-15</td>
<td>14.3</td>
</tr>
<tr>
<td>Ernesto</td>
<td>2-5</td>
<td>4.14</td>
<td>28-31</td>
<td>29.9</td>
</tr>
<tr>
<td>Maggie</td>
<td>7-9</td>
<td>8.28</td>
<td>30-33</td>
<td>31.7</td>
</tr>
<tr>
<td>Maria</td>
<td>4-7</td>
<td>5</td>
<td>18-21</td>
<td>42</td>
</tr>
<tr>
<td>Jennifer</td>
<td>3-5</td>
<td>3.90</td>
<td>2-5</td>
<td>4</td>
</tr>
<tr>
<td>Aldo</td>
<td>0</td>
<td>0</td>
<td>0-1</td>
<td>0.36</td>
</tr>
<tr>
<td>Jorge</td>
<td>2-4</td>
<td>3.36</td>
<td>2-5</td>
<td>3.54</td>
</tr>
</tbody>
</table>

**Intervention Phase**

During intervention, probes were given to each participant at the beginning of the tutoring session (6 to 10 minutes per group). The purpose of this phase was to establish a change in the rate of CPPM and CSPM from baseline, as well as the progress in rate as a result of the intervention. Individual data is presented in Table 4-2.

**Group 1 data.** Once a stable trend line was established in baseline, Group 1 started the intervention phase. During this phase, the group received a total of 24 pseudoword and sight word probes. The mean rate of pseudoword ranged from 11 to 34 CPPM, with an overall phase mean of 23.88 CPPM. This represents a positive change of 17.55 CPPM from baseline to intervention. For sight words, the mean rate
ranged from 51.53 to 73.99 CSPM, with a phase mean of 62.96 CSPM. This shows an increase of 12.14 CSPM from baseline to intervention.

**Group 2 data.** When Group 1 showed an increase in the rate of pseudoword reading over four consecutive sessions, Group 2 started the intervention phase. In the meantime, Group 3 continued on baseline. During the intervention phase, Group 2 received a total of 26 pseudoword and sight word probes. The mean rate of pseudoword ranged from 7.25 to 18.3 CPPM, with a phase mean of 13.41 CPPM. This shows a positive change of 8.66 CPPM from baseline to intervention. For sight words, the mean rate ranged from 24.25 to 41.43 CSPM, with a phase mean of 33.42 CSPM. This shows an increase of 9.6 CSPM from baseline to intervention.

**Group 3 data.** When Group 2 showed an increase in the rate of pseudoword reading over four consecutive sessions, Group 3 started the intervention phase. During the intervention phase, Group 3 received a total of 25 pseudoword and sight word probes. The mean rate of pseudoword ranged from 5 to 13 CPPM, with an overall mean of 8.53 CPPM. This shows a positive change of 6.11 CPPM from baseline to intervention. For sight words, the mean rate ranged from 3 to 12.3 CSPM, with an overall mean of 7.14 CSPM. This shows an increase of 4.51 CSPM from baseline to intervention.

**Summary.** During intervention, all groups showed an increase in the rate of pseudowords and sight words correctly read per minute. The rate of improvement during intervention varied across groups on both variables. Based on the overall phase mean for each group, it was observed that Group 1 had the highest rate of improvement on CPPM and CSPM, followed by Group 2 and Group 3. From baseline to intervention,
Group 1 had an increase of 17.55 CPPM and 12.14 CSPM. Group 2 had an increase of 8.66 CPPM and 9.6 CSPM, while Group 3 had an increase of 6.11 CPPM and 4.51 CSPM.

Table 4-2. Individual rate of CPPM and CSPM during intervention

<table>
<thead>
<tr>
<th></th>
<th>CPPM</th>
<th></th>
<th>CSPM</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Range</td>
<td>Mean</td>
<td>Change from baseline</td>
<td>Range</td>
</tr>
<tr>
<td>Amelia</td>
<td>17-42</td>
<td>30.29</td>
<td>16.79</td>
<td>66.66-93.75</td>
</tr>
<tr>
<td>Pedro</td>
<td>11-39</td>
<td>27.04</td>
<td>27.38</td>
<td>51.6-72.63</td>
</tr>
<tr>
<td>Jessica</td>
<td>6-24</td>
<td>14.20</td>
<td>10.37</td>
<td>33-57.64</td>
</tr>
<tr>
<td>Viviana</td>
<td>4-7</td>
<td>11.11</td>
<td>9.54</td>
<td>14-31</td>
</tr>
<tr>
<td>Ernesto</td>
<td>0-16</td>
<td>11.80</td>
<td>7.66</td>
<td>30-47</td>
</tr>
<tr>
<td>Maggie</td>
<td>9-24</td>
<td>17.5</td>
<td>9.22</td>
<td>23-52.63</td>
</tr>
<tr>
<td>Maria</td>
<td>7-18</td>
<td>13.23</td>
<td>8.23</td>
<td>19-38</td>
</tr>
<tr>
<td>Jennifer</td>
<td>9-19</td>
<td>14.12</td>
<td>10.22</td>
<td>5-19</td>
</tr>
<tr>
<td>Aldo</td>
<td>0-6</td>
<td>1.96</td>
<td>1.96</td>
<td>0-8</td>
</tr>
<tr>
<td>Jorge</td>
<td>5-14</td>
<td>9.52</td>
<td>6.16</td>
<td>3-12</td>
</tr>
</tbody>
</table>

During this phase, Aldo’s rate of pseudoword showed a unique trend. He moved up and down between 0 and 2 CPPM for 19 pseudoword probes. On the 20th probe, he moved up to 5 CPPM and by the 25th probe he was reading 6 CPPM.

**Maintenance Phase**

The maintenance phase started for each group two weeks after the intervention phase ended, with the purpose of determining whether the rate of CPPM and CSPM were sustained over time. The maintenance phase ended for each group when data points showed a stable line at an appropriate reading level. Individual data can be found in Table 4-3.

**Group 1 data.** During the maintenance phase, data were collected over five sessions. The mean rate of pseudowords reading for Group 1 ranged from 36 to 40 CPPM with an overall mean of 37.87 CPPM, an increase of 13.99 CPPM. In addition, the mean rate of sight word reading ranged from 72.71 to 75.56 CSPM, with an overall
phase mean of 74.03 CSPM. This shows a positive improvement from intervention to maintenance of 11.07 CSPM.

**Group 2 data.** Maintenance data were collected over six sessions. Data showed the rate of pseudowords ranged from 15.25 to 21.8 CPPM, with an overall phase mean of 18.88 CPPM. In comparison to the intervention phase, the maintenance phase showed a positive improvement of 5.47 CPPM. Data also showed that the rate of sight words ranged from 38.75 to 44.17 CSPM, with a phase mean of 41.51 CSPM. This shows an increase of 8.09 CSPM from the previous phase.

**Group 3 data.** During the maintenance phase, data were collected over six sessions. Group 3 showed a rate of pseudowords that ranged from 13 to 14.7 CPPM, with a phase mean of 13.8 CPPM. When compared to the intervention phase, Group 3 showed an increase of 5.27 CPPM. Data gathered on rate of sight words ranged from 10 to 13 CSPM, with a phase mean of 12.22 CSPM. This shows an increase of 5.08 CSPM from intervention to maintenance.

**Summary.** During maintenance, all groups sustained and improved on their rates of CPPM and CSPM. For CPPM, Group 2 showed a larger difference from the previous phase (18.88 CPPM), followed by Group 1 (11.71 CPPM), and Group 3 (5.27 CPPM). For CSPM, Group 1 showed the largest difference from the previous phase (14.56 CSPM), followed by Group 2 (8.09 CSPM), and Group 3 (5.08 CSPM).

**Summary of Dependent Variables**

Visual inspection of the data (Figures 4-1 and 4-2) reveals that all groups achieved an immediate improvement in both dependent variables once the intervention started. Group 1, for example, moved from a mean rate of 6 CPPM in baseline to 11 CPPM after only one tutoring session. Group 2 went from 4.8 CPPM in baseline to 7.25 CPPM and
Table 4-3. Individual rate of CPPM and CSPM during maintenance

<table>
<thead>
<tr>
<th></th>
<th>CPPM Range</th>
<th>Mean</th>
<th>Change from intervention</th>
<th>CSPM Range</th>
<th>Mean</th>
<th>Change from intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia</td>
<td>40-43</td>
<td>42</td>
<td>11.71</td>
<td>88.23-94.83</td>
<td>90.81</td>
<td>14.56</td>
</tr>
<tr>
<td>Pedro</td>
<td>38-42</td>
<td>40</td>
<td>12.96</td>
<td>73.16-76.92</td>
<td>75.03</td>
<td>9.8</td>
</tr>
<tr>
<td>Jessica</td>
<td>29-34</td>
<td>31.6</td>
<td>17.4</td>
<td>54.23-58.8</td>
<td>56.25</td>
<td>8.8</td>
</tr>
<tr>
<td>Viviana</td>
<td>14-18</td>
<td>16.16</td>
<td>5.05</td>
<td>29.34</td>
<td>31.83</td>
<td>7.95</td>
</tr>
<tr>
<td>Ernesto</td>
<td>13-19</td>
<td>16.16</td>
<td>4.36</td>
<td>42-47</td>
<td>44.16</td>
<td>3.78</td>
</tr>
<tr>
<td>Maggie</td>
<td>19-29</td>
<td>24.16</td>
<td>6.66</td>
<td>47-53.57</td>
<td>50.39</td>
<td>9.22</td>
</tr>
<tr>
<td>Maria</td>
<td>15-21</td>
<td>19</td>
<td>5.77</td>
<td>35-45</td>
<td>39.66</td>
<td>11.40</td>
</tr>
<tr>
<td>Jennifer</td>
<td>17-19</td>
<td>18.33</td>
<td>4.21</td>
<td>16.18</td>
<td>17</td>
<td>6.48</td>
</tr>
<tr>
<td>Aldo</td>
<td>9-11</td>
<td>10.16</td>
<td>8.2</td>
<td>6-9</td>
<td>7.83</td>
<td>4.63</td>
</tr>
<tr>
<td>Jorge</td>
<td>12-15</td>
<td>13.5</td>
<td>3.98</td>
<td>8-14</td>
<td>11.83</td>
<td>4.11</td>
</tr>
</tbody>
</table>

Group 3 moved from 2.66 CPPM in baseline to 5.33. The trend of improvement continued for all groups as the tutoring sessions progressed. For example, the rate of CPPM during intervention ranged from 11 to 34 for Group 1, 7.25 to 18.25 for Group 2, and 5.33 to 13 for Group 3. A comparison of overall group means between baseline and intervention showed a dramatic change across groups. Specifically, Group 1 moved from a mean rate of 6.33 CPPM to 23.88 CPPM. Similarly, Group 2 moved from a mean rate of 4.75 CPPM to 13.41 CPPM, while Group 3 moved from 2.42 CPPM to 8.53 CPPM.

Improvement was also noticed for the rate of correct sight words read per minute. The immediacy of change observed after one tutoring lesson was less dramatic for CSPM. Group 1, for example, moved from a mean rate of 51.27 CSPM in baseline to 51.33 CSPM. Group 2 went from 24 CSPM to 24.25 CSPM. Similarly, Group 3 moved from 2.33 CSPM to 3 CSPM. The trend of improvement continued for all groups as the
Figure 4-1. Rate of correct pseudowords per minute (CPPM) across groups.
Figure 4-2. Rate of correct sight words read per minute (CSPM) across groups.
tutoring sessions progressed. For example, the rate of CSPM during intervention ranged from 51.53 to 73.99 CSPM for Group 1, 24.25 to 41.45 CSPM for Group 2, and 3 to 12.33 CSPM for Group 3. A comparison of overall group means between baseline and intervention showed a noticeable change across groups. Specifically, Group 1 moved from a mean rate of 50.82 CSPM to 62.96 CSPM. Similarly, Group 2 moved from a mean rate of 23.82 CSPM to 33.42 CSPM, while Group 3 moved from 2.63 CSPM to 7.14 CSPM.

The effect of the UFLI tutoring program on the rate of correct pseudowords and sight words read per minute was sustained two weeks after the intervention ceased. Moreover, the overall mean rate of CPPM and CSPM for all groups continued to increase during the maintenance phase, demonstrating that students had acquired the reading skills taught and continued to use them independently. For Group 1, the overall mean rate of CPPM went from 23.88 to 37.87 CPPM, while the rate of CSPM went from 62.96 to 74.03 CSPM. Similarly, for Group 2, the rate of CPPM went from 13.41 to 18.88 CPPM, while the rate of CSPM went from 33.42 to 41.51. For Group 3, the rate of CPPM went from 8.53 to 13.8 CPPM, and the rate of CSPM went from 7.14 to 12.22.

**Total Number of Sessions**

The number of the tutoring sessions varied across groups. Two elements were considered in determining the total number of sessions for each group. First, tutoring sessions would be terminated once all members were reading level 20 books with at least 90% accuracy (instructional level). Second, additional tutoring sessions would be added to allow all participants who had been absent to participate in a minimum of 40 sessions. A summary of the total number of sessions for each group is presented in Table 4-4.
Group 1 reached level 20 books on session 35. On that session, Amelia read a level 19 book with 96% accuracy, allowing the group to advance to level 20. To ensure that all members of the group were reading level 20 books at an instructional level, three more sessions were conducted. By that time, everyone in Group 1 was able to read level 20 books at an independent level (98% to 100%). After considering the total number of absences each student had, Amelia participated in a total of 34 sessions. She had six absences but was able to make up two sessions. The two make up sessions were done individually and covered all the steps of the small-group lesson format. Jessica participated in a total of 37 sessions, while Pedro participated in a total of 38 sessions.

Group 2 had a total of 47 tutoring sessions. This group did not reach level 20 at the end of the intervention. Therefore, to ensure that all members participated in a minimum of 40 sessions, seven extra sessions were added to compensate for students' absences. Vivian had four absences, so she participated in a total of 43 sessions. Ernesto missed five sessions, so he participated in a total of 42 sessions. Maria missed seven sessions, participating in a total of 40 tutoring sessions. Finally, Maggie received the most sessions (47 total) since she did not miss one day of tutoring.

Group 3 had a total of 45 sessions to compensate for students absences. This group did not reach level 20 at the end of the intervention. Jennifer did not miss one day of tutoring, so she participated in all 45 sessions. Aldo had two absences, so he participated in a total of 43 sessions, while Jorge, with five absences, participated in 40 sessions.
<table>
<thead>
<tr>
<th>Participants</th>
<th>Total absences</th>
<th>Total number of sessions attended/group total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia</td>
<td>6</td>
<td>34/38</td>
</tr>
<tr>
<td>Pedro</td>
<td>0</td>
<td>38/38</td>
</tr>
<tr>
<td>Jessica</td>
<td>1</td>
<td>37/38</td>
</tr>
<tr>
<td>Viviana</td>
<td>4</td>
<td>43/47</td>
</tr>
<tr>
<td>Ernesto</td>
<td>5</td>
<td>42/47</td>
</tr>
<tr>
<td>Maggie</td>
<td>7</td>
<td>40/47</td>
</tr>
<tr>
<td>Maria</td>
<td>0</td>
<td>47/47</td>
</tr>
<tr>
<td>Jennifer</td>
<td>0</td>
<td>45/45</td>
</tr>
<tr>
<td>Aldo</td>
<td>2</td>
<td>43/45</td>
</tr>
<tr>
<td>Jorge</td>
<td>5</td>
<td>40/45</td>
</tr>
</tbody>
</table>

**Supplemental Data**

In addition to the dependent variable, pre- and post-intervention data were collected on students’ early literacy skills and attitudes toward reading, as well as teachers’ ratings of students' reading abilities and classroom behaviors. Also, data were gathered on book levels read by each group during intervention. What follows is a detailed description of findings. Results can be found in Tables 4-5 to 4-13.

**Measures of Early Literacy Skills and Attitudes towards Reading**

Several measures of reading ability were measured before and after intervention. These included: (a) decoding accuracy and fluency, (b) word recognition accuracy and fluency, (c) reading fluency, and (d) reading comprehension. Students’ attitudes towards both recreational and academic reading were measured as well.

**Decoding accuracy and fluency.** Decoding accuracy was assessed by the Nonsense Word Decoding subtest (NWD – KTEA-II), while decoding fluency was measured by the (a) Phonemic Decoding Efficiency subtest (PDE – TOWRE) and the (b) Nonsense Word Fluency test (NWF – DIBELS). Students made a marked improvement in both skills after intervention. The NWD showed that all students
improved on decoding accuracy, with a minimum gain of 6 nonsense words read correctly and a maximum of 21 words read correctly. The PDE test showed improvement in reading fluency with gains that ranged from 4 correct nonsense words to 16 nonsense words. A dramatic change was also observed on the NWF (DIBELS), where students’ gains ranged from 11 to 68 correct letter-sound correspondences per minute. According to risk levels, before intervention there were two students at high risk, six at moderate risk, two at low risk, and none at above average. In contrast, after intervention, there were no students at high or moderate risk, while six were at low risk and 4 at above average. Individual raw scores and percentile ranks can be found in Tables 4-5 to 4-7.

**Word recognition accuracy and fluency.** Word recognition fluency was measured by the Sight Word Efficiency test (SWE – TOWRE), while accuracy was measured by the Letter Word Recognition subtest (LWR – KTEA-II). Results showed that all students made positive gains in both skills. Students’ gains in word reading accuracy ranged from 5 to 15 words read correctly, while gains in word reading fluency ranged from 0 to 15 words per minute. Individual data, including raw scores and percentile ranks can be found in Tables 4-5 and 4-6.

<table>
<thead>
<tr>
<th>Participants</th>
<th>Pre-SWE</th>
<th>Post-SWE</th>
<th>Pre-PDE</th>
<th>Post-PDE</th>
<th>Pre-total</th>
<th>Post-total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia</td>
<td>47 (73%)</td>
<td>62 (84%)</td>
<td>20 (64%)</td>
<td>35 (89%)</td>
<td>70%</td>
<td>91%</td>
</tr>
<tr>
<td>Pedro</td>
<td>46 (70%)</td>
<td>57 (74%)</td>
<td>14 (45%)</td>
<td>24 (66%)</td>
<td>61%</td>
<td>74%</td>
</tr>
<tr>
<td>Jessica</td>
<td>41 (61%)</td>
<td>41 (39%)</td>
<td>13 (42%)</td>
<td>22 (61%)</td>
<td>52%</td>
<td>50%</td>
</tr>
<tr>
<td>Viviana</td>
<td>25 (27%)</td>
<td>33 (25%)</td>
<td>2 (12%)</td>
<td>15 (39%)</td>
<td>14%</td>
<td>29%</td>
</tr>
<tr>
<td>Ernesto</td>
<td>34 (45%)</td>
<td>45 (48%)</td>
<td>4 (16%)</td>
<td>17 (45%)</td>
<td>25%</td>
<td>42%</td>
</tr>
<tr>
<td>Maggie</td>
<td>36 (50%)</td>
<td>46 (48%)</td>
<td>7 (21%)</td>
<td>18 (48%)</td>
<td>32%</td>
<td>48%</td>
</tr>
<tr>
<td>Maria</td>
<td>27 (32%)</td>
<td>38 (32%)</td>
<td>11 (32%)</td>
<td>15 (39%)</td>
<td>29%</td>
<td>32%</td>
</tr>
<tr>
<td>Jennifer</td>
<td>11 (8%)</td>
<td>29 (19%)</td>
<td>8 (25%)</td>
<td>24 (66%)</td>
<td>10%</td>
<td>39%</td>
</tr>
<tr>
<td>Aldo</td>
<td>5 (3%)</td>
<td>18 (6%)</td>
<td>0 (10%)</td>
<td>12 (29%)</td>
<td>3%</td>
<td>10%</td>
</tr>
<tr>
<td>Jorge</td>
<td>13 (10%)</td>
<td>34 (25%)</td>
<td>10 (29%)</td>
<td>22 (61%)</td>
<td>14%</td>
<td>39%</td>
</tr>
</tbody>
</table>

*SWE= sight word efficiency. PDE = phonemic decoding efficiency. Total = total word reading efficiency.*
Table 4-6. Pre- and post-intervention KTEA-II raw scores and percentiles ranks

<table>
<thead>
<tr>
<th>Participants</th>
<th>Pre-LWR</th>
<th>Post-LWR</th>
<th>Pre-NWD</th>
<th>Post-NWD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia</td>
<td>44 (50%)</td>
<td>49 (53%)</td>
<td>4 (25%)</td>
<td>23 (75%)</td>
</tr>
<tr>
<td>Pedro</td>
<td>35 (30%)</td>
<td>50 (58%)</td>
<td>8 (45%)</td>
<td>23 (75%)</td>
</tr>
<tr>
<td>Jessica</td>
<td>40 (42%)</td>
<td>49 (53%)</td>
<td>9 (50%)</td>
<td>15 (58%)</td>
</tr>
<tr>
<td>Viviana</td>
<td>24 (5%)</td>
<td>36 (18%)</td>
<td>2 (16%)</td>
<td>16 (58%)</td>
</tr>
<tr>
<td>Ernesto</td>
<td>29 (16%)</td>
<td>40 (27%)</td>
<td>2 (16%)</td>
<td>13 (53%)</td>
</tr>
<tr>
<td>Maggie</td>
<td>39 (30%)</td>
<td>44 (37%)</td>
<td>3 (21%)</td>
<td>21 (70%)</td>
</tr>
<tr>
<td>Maria</td>
<td>31 (21%)</td>
<td>41 (30%)</td>
<td>0 (3%)</td>
<td>21 (70%)</td>
</tr>
<tr>
<td>Jennifer</td>
<td>23 (4%)</td>
<td>30 (10%)</td>
<td>3 (21%)</td>
<td>14 (55%)</td>
</tr>
<tr>
<td>Aldo</td>
<td>15 (0.5%)</td>
<td>29 (8%)</td>
<td>0 (3%)</td>
<td>11 (45%)</td>
</tr>
<tr>
<td>Jorge</td>
<td>20 (2%)</td>
<td>31 (30%)</td>
<td>4 (5%)</td>
<td>14 (55%)</td>
</tr>
</tbody>
</table>

LWR stands for letter-word recognition. NWD stands for Nonsense Word Decoding.

Table 4-7. Pre- and post-intervention DIBELS Nonsense Word Fluency scores

<table>
<thead>
<tr>
<th>Participants</th>
<th>Pre-intervention</th>
<th>Post-intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia</td>
<td>67 (LR)</td>
<td>116 (AA)</td>
</tr>
<tr>
<td>Pedro</td>
<td>45 (MR)</td>
<td>113 (AA)</td>
</tr>
<tr>
<td>Jessica</td>
<td>47 (MR)</td>
<td>112 (AA)</td>
</tr>
<tr>
<td>Viviana</td>
<td>46 (MR)</td>
<td>57 (LR)</td>
</tr>
<tr>
<td>Ernesto</td>
<td>46 (MR)</td>
<td>63 (LR)</td>
</tr>
<tr>
<td>Maggie</td>
<td>66 (LR)</td>
<td>64 (LR)</td>
</tr>
<tr>
<td>Maria</td>
<td>35 (MR)</td>
<td>54 (LR)</td>
</tr>
<tr>
<td>Jennifer</td>
<td>42 (MR)</td>
<td>99 (AA)</td>
</tr>
<tr>
<td>Aldo</td>
<td>3 (HR)</td>
<td>51 (LR)</td>
</tr>
<tr>
<td>Jorge</td>
<td>38 (HR)</td>
<td>59 (LR)</td>
</tr>
</tbody>
</table>

Scores refer to the number of correct letter-sound correspondences read per minute. AA = above average, LR = low risk, MR = moderate risk, and HR = high risk.

**Reading fluency.** The Oral Reading Fluency test (ORF – DIBELS) was used to measure students’ fluency of connected text. Results showed that all students made gains from the beginning of second grade passage to the end of second grade passage, with gains ranging from 9 to 54 correct words per minute. On grade-level passages, at the beginning of the intervention, six students were at high risk and 4 were at low risk. In contrast, at the end of the intervention, five students were at high risk, three at moderate risk, and two at low risk. Students who were at moderate risk or high risk on any of the passages were administered easier passages until a low risk or above average status
were achieved, or until passages corresponding to the middle of first grade were reached. Individual data can be found in Tables 4-8 and 4-9.

**Table 4-8. Pre-intervention DIBELS Oral Reading Fluency scores**

<table>
<thead>
<tr>
<th>Participants</th>
<th>Beginning-second grade ORF passage</th>
<th>End-first grade ORF passage</th>
<th>Mid-first grade ORF passage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia</td>
<td>55 (LR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedro</td>
<td>63 (LR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jessica</td>
<td>61 (LR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viviana</td>
<td>14 (HR) 11 (HR) 19 (MR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ernesto</td>
<td>25 (HR) 34 (MR) 47 (AA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maggie</td>
<td>45 (LR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maria</td>
<td>16 (HR) 21 (MR) 18 (MR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jennifer</td>
<td>7 (HR) 10 (HR) 6 (HR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aldo</td>
<td>3 (HR) 1 (HR) 3 (HR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jorge</td>
<td>7 (HR) 7 (HR) 3 (HR)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Scores correspond to the total number of words read correctly per minute. Passages with no scores were not administered to those particular students. AA = above average, LR = low risk, MR = moderate risk, and HR = high risk.

**Table 4-9. Post-intervention DIBELS Oral Reading Fluency scores**

<table>
<thead>
<tr>
<th>ORF Passages</th>
<th>Participants</th>
<th>End-2\textsuperscript{nd} grade</th>
<th>Mid-2\textsuperscript{nd} grade</th>
<th>Beginning 2\textsuperscript{nd} grade</th>
<th>End-1\textsuperscript{st} grade</th>
<th>Mid-1\textsuperscript{st} grade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amelia</td>
<td>102 (LR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Pedro</td>
<td>94 (LR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jessica</td>
<td>75 (MR) 73 (LR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Viviana</td>
<td>49 (HR) 48 (HR) 46 (LR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ernesto</td>
<td>79 (MR) 65 (MR) 74 (AA)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maggie</td>
<td>79 (MR) 66 (MR) 62 (LR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Maria</td>
<td>56 (HR) 52 (MR) 48 (LR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jennifer</td>
<td>33 (HR) 34 (MR) 28 (MR) 33 (LR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aldo</td>
<td>12 (HR) 11 (HR) 11 (HR) 17 (MR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jorge</td>
<td>32 (HR) 35 (MR) 34 (MR) 31 (LR)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Scores correspond to the total number of correct words read per minute. Passages with no scores were not administered to those particular students. AA = above average, LR = low risk, MR = moderate risk, and HR = high risk.

**Reading comprehension.** The Qualitative Reading Inventory-4 (QRI-4) was administered to measure reading comprehension in two ways: (a) ideas recalled, and (b) questions answered. The passage selected to read was contingent on ORF (DIBELS) risk status. Before intervention, four students read level two passages, one
student read a primer passage, and four students did not read any passages. In contrast, after intervention, seven students read level two passages, two read primer passages, and only one student did not read any passages. Results showed that all students increased the number of ideas recalled. For the total number of questions answered correctly (explicit and implicit), scores remained the same for one student and increased for the other nine students. Individual data can be found in Tables 4-10.

**Attitudes toward reading.** The Elementary Reading Attitude Survey (ERAS) was used to assess students’ attitudes toward reading. This survey measures attitudes toward academic reading and recreational reading. It also provides a total attitude toward reading score. Results showed that all students made a marked improvement in attitudes toward reading in general, with gains in raw scores ranging from 15 to 38. Changes in attitudes toward recreational reading ranged from 4 to 19, and toward academic reading ranged from 5 to 23. A summary of raw scores and percentile ranks is presented in Table 4-11.

**Reading Ability Rating Scale.** Before and after the intervention, teachers evaluated the reading ability of their students using the Reading Ability Rating Scale. This scale addressed five key areas of reading: (i.e., phonological awareness, phonics, fluency, comprehension, and vocabulary), and one area related to classroom behaviors (i.e., participation in class, use of English to communicate in class, and motivation to read). Mean scores were calculated and reported for each of the five reading areas and raw scores were reported for classroom behaviors. Pre- and post-intervention scores showed equal or higher ratings for all students on phonological awareness, phonics, fluency, and comprehension. In contrast, in the area of vocabulary, six students
### Table 4-10. Pre/Post-intervention QRI-4 comprehension raw scores

<table>
<thead>
<tr>
<th>Student</th>
<th>Passage Level</th>
<th>Ideas Recalled</th>
<th>Explicit Questions</th>
<th>Implicit Questions</th>
<th>Total Questions</th>
<th>Reading Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>Amelia</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>12</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Pedro</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>19</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Jessica</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>8</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Viviana</td>
<td>N/A</td>
<td>2</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Ernesto</td>
<td>P</td>
<td>2</td>
<td>0</td>
<td>9</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Maggie</td>
<td>2</td>
<td>2</td>
<td>8</td>
<td>9</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Maria</td>
<td>N/A</td>
<td>2</td>
<td>10</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jennifer</td>
<td>N/A</td>
<td>P</td>
<td>5</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Aldo</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jorge</td>
<td>N/A</td>
<td>P</td>
<td></td>
<td></td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>

Students read one of three passages: P = Primer, 1 = Level 1, 2 = Level 2. Ideas recalled, explicit questions, implicit questions, and total questions answered correctly correspond to the passage read by each student. Reading levels were identified based on the number of total correct answers based on QRI-4 norms. Inst = Instructional, Ind = Independent, Frus = Frustration. Students with no scores did not take the QRI-4 due to risk status on DIBELS ORF.
Table 4-11. ERAS Pre- and post-intervention raw scores and percentile ranks

<table>
<thead>
<tr>
<th>Participants</th>
<th>Recreational Reading Post</th>
<th>Academic Reading Post</th>
<th>Total Reading Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia</td>
<td>27 (31%)</td>
<td>33 (68%)</td>
<td>52 (29%)</td>
</tr>
<tr>
<td>Pedro</td>
<td>23 (11%)</td>
<td>29 (44%)</td>
<td>51 (26%)</td>
</tr>
<tr>
<td>Jessica</td>
<td>21 (6%)</td>
<td>30 (50%)</td>
<td>46 (1%)</td>
</tr>
<tr>
<td>Viviana</td>
<td>20 (4%)</td>
<td>39 (94%)</td>
<td>41 (6%)</td>
</tr>
<tr>
<td>Ernesto</td>
<td>30 (50%)</td>
<td>34 (74%)</td>
<td>49 (20%)</td>
</tr>
<tr>
<td>Maggie</td>
<td>21 (6%)</td>
<td>36 (84%)</td>
<td>44 (9%)</td>
</tr>
<tr>
<td>Maria</td>
<td>24 (15%)</td>
<td>38 (92%)</td>
<td>50 (23%)</td>
</tr>
<tr>
<td>Jennifer</td>
<td>23 (11%)</td>
<td>30 (50%)</td>
<td>44 (9%)</td>
</tr>
<tr>
<td>Aldo</td>
<td>16 (1%)</td>
<td>31 (56%)</td>
<td>30 (0%)</td>
</tr>
<tr>
<td>Jorge</td>
<td>13 (0%)</td>
<td>21 (8%)</td>
<td>32 (1%)</td>
</tr>
</tbody>
</table>

obtained higher ratings, three obtained equal ratings, and one obtained a lower rating.

For classroom behaviors, the majority of students received equal or higher ratings on participation in class, use of English in class, and motivation to read. For each of these behaviors, only one or two students obtained lower rates from their teachers. Data can be found in Tables 4-12 and 4-13.

Table 4-12. Pre- and post-intervention mean rate scores for reading skills on the RARS

<table>
<thead>
<tr>
<th>Name</th>
<th>Phonemic Awareness Pre</th>
<th>Phonemic Awareness Post</th>
<th>Phonics Pre</th>
<th>Phonics Post</th>
<th>Fluency Pre</th>
<th>Fluency Post</th>
<th>Comprehension Pre</th>
<th>Comprehension Post</th>
<th>Vocabulary Pre</th>
<th>Vocabulary Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia</td>
<td>2.3</td>
<td>4</td>
<td>1.8</td>
<td>3.3</td>
<td>1.8</td>
<td>3</td>
<td>1.6</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Pedro</td>
<td>3</td>
<td>3</td>
<td>3.2</td>
<td>3</td>
<td>2.2</td>
<td>2.2</td>
<td>2.8</td>
<td>3.2</td>
<td>3.66</td>
<td>4</td>
</tr>
<tr>
<td>Jessica</td>
<td>2</td>
<td>4</td>
<td>2.5</td>
<td>3.5</td>
<td>2</td>
<td>3.2</td>
<td>1.6</td>
<td>2.6</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Viviana</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1.8</td>
<td>1</td>
<td>1.2</td>
<td>1</td>
<td>1.4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ernesto</td>
<td>1</td>
<td>1</td>
<td>1.5</td>
<td>1.6</td>
<td>1</td>
<td>1.2</td>
<td>1</td>
<td>1.6</td>
<td>1.6</td>
<td>1.6</td>
</tr>
<tr>
<td>Maggie</td>
<td>2.6</td>
<td>3</td>
<td>2.5</td>
<td>3.3</td>
<td>1.3</td>
<td>2.83</td>
<td>1.2</td>
<td>2.6</td>
<td>3.3</td>
<td>3.66</td>
</tr>
<tr>
<td>Maria</td>
<td>3</td>
<td>4</td>
<td>2.5</td>
<td>3.66</td>
<td>2.2</td>
<td>2.5</td>
<td>1.6</td>
<td>2</td>
<td>2.6</td>
<td>2.66</td>
</tr>
<tr>
<td>Jennifer</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1.6</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1.2</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Aldo</td>
<td>1</td>
<td>3.33</td>
<td>1</td>
<td>2.83</td>
<td>1</td>
<td>1.5</td>
<td>1</td>
<td>1.4</td>
<td>1</td>
<td>2.66</td>
</tr>
<tr>
<td>Jorge</td>
<td>2.3</td>
<td>3</td>
<td>1.3</td>
<td>2.66</td>
<td>1</td>
<td>1.83</td>
<td>1</td>
<td>2.2</td>
<td>3.66</td>
<td>2.66</td>
</tr>
</tbody>
</table>

Scores represent mean rates that range from 1 (very weak) to 4 (very strong).

**Book Levels Read during Intervention**

As a result of the tutoring programs, all groups showed a marked improvement in book levels. Group 1 started at a higher level than the other groups. At the beginning of
Table 4-13. Pre- and post-intervention rate scores for classroom behaviors on the RARS

<table>
<thead>
<tr>
<th></th>
<th>Participation in Class Pre</th>
<th>Participation in Class Post</th>
<th>Use of English in Class Pre</th>
<th>Use of English in Class Post</th>
<th>Motivation to Read Pre</th>
<th>Motivation to Read Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amelia</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Pedro</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Jessica</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Viviana</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Ernesto</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Maggie</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Maria</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Jennifer</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Aldo</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Jorge</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>4</td>
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Scores for classroom behaviors represent the raw score for each of the three items included in this area. Scores go from 1 (very weak) to 4 (very strong).

the intervention (early November), students were reading books at level 9, corresponding to the middle of first grade. After 38 tutoring sessions (mid-January), all members of the group were reading books at level 20 with 98 to 100% accuracy. According to Reading Recovery book levels, students in second grade should reach level 20 by the end of the school year. This means that students in Group 1 were able to catch up to and surpass the expected reading levels for the specific time of year.

Group 2 also showed notable improvement in book reading. At the beginning of the intervention (beginning of November), the group started reading books at level 2, which corresponded to the beginning of first grade. After 47 sessions the group reached level 16, corresponding to the end of first grade. While these students were still behind their peers, it is important to note that in approximately three and a half months, they had made the equivalent of one year’s progress according to Reading Recovery book levels.

For Group 3, the improvement was less drastic, but still relevant. All members of this group started the intervention phase reading level 1 books, corresponding to the
beginning of first grade. Level 1 books contain the most basic level of text, and the text is heavily supported by the pictures. Children are expected to read level 1 books in late kindergarten or at the beginning of first grade. At the end of 45 sessions (three and a half months), the group progressed to level 7. These students remained in each book level far longer than those in the other groups, showing marked difficulties acquiring the decoding strategies being taught. Yet, with systematic and explicit instruction, they were able to make more improvement in three and a half months of intervention than they had made in all of their schooling before the intervention began. It is important to consider that all three members were repeating second grade, so their progress during intervention can be considered their first actual reading growth. A graph depicting the progression of book levels by each group can be found in Figure 4-3.

![Figure 4-3. Book levels read by each group during intervention.](image)
Summary of Supplemental Data

Supplemental data showed that students made marked improvements on all measures of early literacy skills, on book levels read, and on attitudes toward reading. Some of the largest improvements were on decoding accuracy (NWD from KTEA-II) and decoding fluency (PDE from TOWRE and NWF from DIBELS). Word recognition accuracy (LWR from KTEA-II) and fluency (SWE from TOWRE) were also impacted but to a lesser degree. The effect of the intervention was also observed on students’ oral reading fluency (ORF DIBELS), where students were able to read more words per minute in connected text. Furthermore, at the end of the intervention, QRI-4 scores demonstrated that students were able to comprehend texts, by recalling more ideas from the stories read and by answering more explicit and implicit questions. Improvements in students reading skills were also observed by teachers who rated students higher on phonemic awareness, phonics, fluency, comprehension, and vocabulary. Results also showed that students in every group made considerable advances on the levels of books they read during intervention making at least one half’s year progress. In addition, a much more positive outlook on reading was observed as students exhibited dramatic improvements in their attitudes toward academic and recreational reading.

Social Validity

Data collected through the students’ interviews and the teachers’ questionnaire showed that the program was regarded as important, effective, and feasible. What follows is a summary of students’ and teachers’ responses. A visual depiction of teachers’ answers can be found in Figures 4-4 and 4-5.
**Student Interview**

At the end of the maintenance phase, students participated in a social validity interview that consisted of seven questions. The interviews took approximately five minutes and were conducted individually. Results showed that all ten participants had positive feelings about the tutoring lessons. They all thought the lessons helped them become better readers and that other students should participate in the program. Nine students affirmed that they will use what they learned when they read.

In relation to students’ favorite part of the lesson, six out of ten said they preferred doing word work with magnetic letters, while four said they liked reading books. When asked about their least favorite part of the lesson, only four students stated disliking a part of the lesson. They all reported that writing was their least favorite. Finally, nine out of ten students said that they enjoyed working in small groups.

**Teacher Questionnaire**

At the end of the intervention, teachers completed a social validity questionnaire after observing a videotaped tutoring session. The questionnaire was divided in six different sections. The first five sections focused on the different components of the UFLI program (e.g., repeated reading of familiar books, progress monitoring, word work with manipulative letters, reading a new book, writing for reading). In each of the five sections, teachers had to answer yes or no to four questions: (1) Do you feel that this part of the lesson will help ELLs develop reading skills? (2) Do you believe that this component is easy to implement with ELLs? (3) Currently, do you use a similar strategy when you work with ELLs? (4) Would you be likely to use a strategy like this one with ELLs during your reading instruction? Besides answering yes or no, teachers had the option of explaining the reason behind their answers.
The sixth section focused on the overall tutoring lesson. Teachers had to answer six questions: (1) Do you feel that the tutoring lesson can help ELLs develop reading skills? (2) Do you believe that this lesson is easy to implement? (3) Would you be willing to implement the lesson in your classroom? (4) Would you be willing to implement components of the lesson in your classroom? (5) Would you be interested in learning how to implement this tutoring program? (6) Do you think other teachers of ELLs might be interested in learning to implement this program? Teachers also had the option of explaining the reason for their answers.

Results showed that all teachers believed that each of the components and the UFLI lesson as a whole can help ELLs develop their reading skills. They also agreed that the UFLI lesson and all its components would be easy to implement in the classroom, except for one teacher who stated that progress monitoring and writing for reading would be difficult to execute with ELLs. According to her, it “gets difficult with a full class.”

When asked if they were using similar strategies with ELLs, they all reported using repeated reading in the classroom. Four out of six teachers said they were conducting progress monitoring, and using a strategy similar to reading for writing, while five out of six reported doing word work and reading new books. All teachers stated that they would be likely to incorporate the UFLI lesson or any of its components in their classrooms, but only four out of six were interested in learning how to implement it. Also, five out of six agreed that other teachers of ELLs might be interested in learning how to implement the UFLI program. Teachers’ answers for each question related to
UFLI tutoring components are depicted in Figure 4-4, while answers for questions related to the UFLI tutoring program as a while are represented in Figure 4-5.

**Figure 4-4.** Teachers’ responses to the social validity questionnaire about the UFLI components

![Figure 4-4](image-url)

**Figure 4-5.** Teachers’ responses to the social validity questionnaire about the UFLI program

![Figure 4-5](image-url)

### Summary of One-on-One Tutoring Data

In this section, a summary of findings is provided for the student receiving one-on-one tutoring. First, changes in the two dependent variables (CPPM and CSPM) are
reported for each of the phases. Then, supplemental data is reported, including pre- and post-intervention measures of early reading skills, attitudes toward reading and teacher’s rating scales, as well as changes in leveled book reading.

**Dependent Variables**

The rates of CPPM and CSPM were calculated for each probe and plotted into a graph for visual analysis (see Figure 4-6). During baseline, Miriam received a total of five pseudoword and sight word probes. The rate of pseudowords ranged from 3 to 5 CPPM with a mean score of 4.66 CPPM, while the rate of sight word reading ranged from 13 to 16 CSPM, with a mean rate of 14.66 CSPM. Once a stable trend line was established during baseline, Miriam started the intervention phase. During this phase, she received a total of 26 pseudoword and sight word probes, one for each tutoring session. The rate of pseudoword reading ranged from 10 to 28 CPPM, with a mean score of 17.65 CPPM, which shows an increase of 12.99 CPPM from baseline to intervention. Furthermore, the rate of sight word reading ranged from 16 to 46 CSPM, with a mean score of 30.1 CSPM. This shows a positive change of 15.44 CSPM from baseline to intervention. Intervention ended after 26 tutoring lessons when she was able to read books at level 20 with more than 95% accuracy. Two weeks after the intervention ceased, maintenance data were collected using the same set of probes. At that time, Miriam’s rate of pseudoword reading ranged from 24 to 27 CPPM, with a mean score of 25.4 CPPM, which shows an increase of 7.75 from the previous phase. Furthermore, the rate of sight word reading ranged from 43 to 46 CSPM, with a mean score of 44.2 CSPM. This shows a positive change of 14.1 CSPM from intervention to maintenance.
Figure 4-6. Rate of correct pseudoword and sight word read per minute for Miriam.

**Supplemental Data**

Before intervention, Miriam’s raw score on Sight Word Efficiency (SWE) was 28, which placed her at the 32\(^{nd}\) percentile, while her score on Phonemic Decoding Efficiency (PDF) was 6, which placed her on the 19\(^{th}\) percentile. Miriam’s percentile score on the Total Word Reading Efficiency was 21\%. By the end of the intervention, she obtained a score of 54 on the SWE (67\(^{th}\) percentile) and 20 on the PDF (84\(^{th}\) percentile). Her Total Word Reading Efficiency placed her at the 64\(^{th}\) percentile. The KTEA-II scores improved after intervention as well. On Letter Word Recognition (LWR) she went from the 36 correct words read (32\(^{nd}\) percentile) to 43 words (34\(^{th}\) percentile). On Nonsense Word Decoding (NWD), she went from 6 nonsense words (37\(^{th}\) percentile) to 20 nonsense words read correctly (68\(^{th}\) percentile). On DIBELS, Miriam’s NWF scores went from 51 (low risk) to 94 (above average), showing an improvement of
43 correct letter-sound correspondences per minute. ORF scores showed an increase of 48 words, going from 18 (high risk) to 66 words per minute (high risk). Given her high risk status, easier passages were administered at both times. At the beginning of the study, she read 18 words on the end of first grade passage (high risk), and 20 words on the middle of first grade passage (low risk). At the end of the study, Miriam read 68 words on the middle of second grade passage (low risk).

Comprehension scores on the QRI-4 before intervention were based on a primer level passage. Miriam was able to recall two ideas, and answer one explicit question correctly. This showed that she was reading primer level passages at a frustration level. After intervention, she was given a level two passage. Miriam was able to recall 14 ideas from the story and answered four explicit and three implicit questions. A score of seven points indicated that she was reading level two passages at an instructional level.

Attitudes toward reading showed a marked improvement after intervention. Initially, Miriam obtained 20 points (4\(^{th}\) percentile) on recreational reading and 22 points (18\(^{th}\) percentile) on academic reading. Overall, she scored a total of 42 points (7\(^{th}\) percentile). After intervention, recreation reading score went up to 32 points (62\(^{th}\) percentile) and academic went up to 35 points (81\(^{st}\) percentile). Her total score was 67, which corresponded to the 74\(^{th}\) percentile.

The teacher’s ratings on the RARS increased after intervention for most areas of reading ability. The mean score for phonological awareness remained at 3 (strong). In contrast, phonics mean rates went from 2.66 (weak) to 3.3 (strong), fluency rates from 1.83 (very weak) to 2.3 (weak), comprehension from 2.4 (weak) to 3.2 (strong), and vocabulary from 3 (strong) to 4 (very strong). Classroom behaviors remained the same.
for class participation with a score of 3 (strong) and use of English to communicate in class with a score of 4 (very strong). Motivation to read increased from a score of 3 (strong) to 4 (very strong).

Miriam also showed rapid progress in leveled books throughout the intervention. At the beginning of the study, she was reading books at level 6, which correspond to early first grade. On session 25th, she moved up to level 20, which corresponds to the end of second grade. On session 26th, she read a level 20 book with more than 95% accuracy. Figure 4-7 depicts Miriam’s progress compared to the changes in groups’ book reading.

Figure 4-7. Book levels read by Miriam during intervention. This figure compares the changes in book levels during one-on-one tutoring compared to the progress made by students in small-group tutoring and illustrates the faster rate of growth for the student receiving one-on-one tutoring.

Summary of Findings

The findings described in this chapter reveal that the UFLI tutoring program was an effective small-group reading intervention that produced drastic changes in students'
reading abilities. Improved rates of CPPM and CSPM were reached during the intervention phase and sustained two weeks after it ended. Changes in pre-and post-intervention measures, as well as changes in book levels read throughout the lessons provide additional evidence of the programs’ effectiveness. Furthermore, social validity data demonstrated that the UFLI tutoring program was considered effective, efficient, and important by students and teachers. Chapter 5 provides interpretation of these findings, including their implications for practice and research.
The purpose of this study was to evaluate the effectiveness of a modified version of the University of Florida Literacy Initiative (UFLI) small-group tutoring program on the reading skills of second-grade Spanish-speaking, English language learners, who were struggling to read in English. The aim of this chapter is to summarize and interpret the results obtained in this study. The chapter is organized in several sections: (a) overview of the study, (b) summary of findings, (c) interpretation of findings, (d) interpretation of supplemental data, (e) social validity, (f) effectiveness of the UFLI tutoring program, (g) implications for future research, (h) implications for practice, and (i) conclusions.

**Overview of the Study**

A single-subject, multiple baseline across groups design was implemented to examine the effects of the UFLI tutoring program on the reading skills of 10 Spanish-speaking, English language learners who were struggling to read in second grade. Participants ranged in age from 7 years 8 months to 10 years 1 month at the beginning of the study. School personnel identified struggling second-grade ELLs, whose native language was Spanish, and who were performing below level on their latest end-of-year SAT-10 and DIBELS scores. Based on these two scores, as well as beginning-of-year Invented Spelling Assessment scores, students were selected to participate in the small-group tutoring program designed to address word reading skills and modified to support their language needs. The level of English and Spanish oral language proficiency of the participants varied from negligible to fluent.

Students were grouped based on the level of book they were able to read with 90% to 95% accuracy, as determined by running records and using Reading Recovery
book levels. A total of three groups were formed. Group 1 was composed of three students (1 male and 2 female) reading level 9 books. Group 2 was composed of four students (1 male and 3 female) reading level 2 books. And Group 3 was composed of three students (2 male and 1 female) reading level 1 books.

The focus of this study was an examination of the effects of the UFLI program on two reading skills: decoding and sight word reading. Decoding was measured by assessing the rate of correct pseudowords read per minute, while sight word reading was measured by assessing the rate of correct sight words read per minute. For this purpose, data were collected during three phases: (a) baseline, (b) intervention, and (c) maintenance. During baseline, students were given pseudoword and sight word probes with the goal of establishing the rate of correct words each was able to read per minute. When Group 1 demonstrated a stable line over six data points, the group moved to the intervention phase. Meanwhile, the other groups remained in baseline. When Group 1 showed an increase in four consecutive data points, Group 2 moved from baseline to intervention. The cycle was repeated for Group 3.

During intervention, 10 students participated in small-group tutoring sessions for 45 minutes, 2 to 5 times a week. The total number of sessions varied across groups based on students’ attendance and book level reached by the group. The maintenance phase of the study was designed to examine whether the effects of the UFLI program were sustained two weeks after the intervention concluded. One additional student participated in one-on-one tutoring sessions using the same instructional methods.

In addition to rate of pseudowords and sight words read per minute, supplemental data were collected, including pre- and post- measures of reading skills (e.g., decoding,
word recognition, fluency, comprehension, attitudes toward reading) as well as
teachers’ ratings of students’ reading abilities and classroom behaviors. Also, changes
in book reading throughout the intervention were recorded for each group. Finally, social
validity information was collected through student and teacher social validity
questionnaires.

Summary of Findings

An examination of the data gathered showed several key findings. First, the UFLI
small-group tutoring program was effective in producing substantial improvement on
decoding and word recognition skills of students, as measured by the rate of correct
pseudowords read per minute and the rate of correct sight words read per minute.
Furthermore, students sustained these improved rates two weeks after the intervention
ceased, demonstrating the effectiveness of the UFLI program in producing a lasting
effect on students’ reading skills.

Second, in addition to the two main variables, all groups showed a marked
improvement when reading leveled books. Group 1 made the equivalent of one and a
half year’s progress in 38 sessions, going from level 9 to level 20 books. Group 2 made
a year’s progress in 47 sessions, going from level 2 to level 16 books. Finally, Group 3
showed approximately one-half year’s progress in 45 sessions, moving from level 1 to
level 7 books. In other words, all groups made more rapid progress during the
intervention than would be expected during typical classroom instruction.

Third, supplemental data showed that participants improved on pre-and post-
intervention measures of decoding, word recognition, oral reading fluency,
comprehension, and attitude toward reading. In particular, students showed
improvement in decoding and word recognition accuracy and fluency. Changes in
students’ abilities were also observed by their teachers, who rated them higher on phonemic awareness, phonics, fluency, vocabulary, comprehension, and classroom behaviors.

Fourth, all participants benefitted from the intervention, regardless of their initial level of English oral language proficiency. It is important to note that not all students in the higher reading performing group had the highest level of oral proficiency. On the contrary, there were some students in lower groups who had equal or higher levels of oral proficiency. Thus, the rate of improvement differed across groups with different reading levels and not different proficiency levels.

Fifth, the student who received one-on-one intervention using the same instructional methods also demonstrated considerable reading growth on the two dependent variables. In fact, her progress was more rapid than that of the students receiving small-group instruction. Supplemental data also showed a marked improvement in reading ability after intervention.

Finally, social validity data showed that the UFLI program was well received by students and teachers who noticed its effectiveness in improving students’ reading skills. The program was not only deemed effective, but also feasible. Students believed that other ELLs might benefit from the program, and teachers reported their willingness to implement it in their classrooms.

**Interpretation of Findings**

Findings from this study provide evidence to support the use of early reading interventions in English for ELLs who are struggling to learn to read in their second language. Specifically, the UFLI tutoring program was effective in promoting word reading skills among second-grade, Spanish-speaking ELLs who were receiving
reading instruction and who had been performing below grade level in measures of reading achievement. As a result of daily, small-group tutoring sessions focusing on word reading skills, participating students showed a marked improvement in their decoding skills, as measured by the rate of correct pseudowords read per minute (CPPM), and word recognition, as measured by correct sight words read per minute (CSPM). These findings are consistent with previous studies reporting the effectiveness of word-level reading interventions on the reading skills of Spanish-speaking ELLs, particularly on word attack (Gunn et al., 2000, 2002, 2005; Linan-Thompson, Vaughn et al., 2003; Vaughn, Cirino et al., 2006; Vaughn, Linan-Thompson, & Hickman, 2003; Vaughn, Mathes et al., 2006) and word identification skills (Al Otaiba, 2005; Gunn et al., 2000, 2002, 2005; Quiroga et al., 2002; Vaughn, Cirino, et al., 2006).

Decoding and automatic word recognition are critical skills in the early stages of reading development. Beginning readers need to develop the ability to analyze and manipulate the sounds in speech, as well as to recognize the letter-sound correspondences so that they can effectively decode unfamiliar words in print (Ehri, 2004). Furthermore, students must develop the ability to read words accurately and automatically to achieve fluent reading (Stahl, 2004). In order to promote these reading skills, researchers have underscored the importance of providing instruction in phonemic awareness and phonics not only for native speakers of English (Adams, 1990; Ehri, 2004), but also for English language learners (Ehri & Roberts, 2006; Helman & Burns, 2008). The present study provides further evidence to support the importance of such instruction.
Progression through Phases of Word Recognition Development

Based on recent findings suggesting that native English speakers and ELLs develop word recognition skills in similar ways (Chiappe & Siegel, 2006; Chiappe, Siegel, & Gottardo, 2002; Chiappe, Siegel, & Wade-Wolley, 2002; Geva et al., 2000; Jackson & Lu, 1992; LeSaux, Koda, Siegel, & Shanahan, 2006; Limbos & Geva, 2001; Verhoeven, 1990, 2000; Wade-Woolley & Siegel, 1997), students’ response to the UFLI intervention can be described following Ehri’s phases of word reading development. According to Ehri and McCormick (1998), readers progress through five phases of word reading development: (a) pre-alphabetic, (b) partial-alphabetic, (c) full-alphabetic, (d) consolidated-alphabetic, and (e) automatic (Ehri & McCormick, 1998). Each phase is characterized by the learner’s “understanding and use of the alphabetic system” (p. 140).

Before the UFLI intervention, some of the second-grade participants displayed reading behaviors typical of the partial-alphabetic phase, while others displayed behaviors of an incipient full-alphabetic phase. According to Ehri (2005b), the partial alphabetic phase is commonly seen among kindergarten and first grade students, while the full-alphabetic phase is commonly seen among first-graders. Nevertheless, it is not unusual to find older struggling readers at any of these phases. Students who have not developed strong skills in the full-alphabetic phase, particularly struggling readers, need systematic phonics and phonemic awareness instruction to help them develop the ability to read words accurately and automatically (Ehri & McCormick, 1998). Consistent with this premise, after participating in the UFLI tutoring program, all ten participants exhibited a more advanced word reading ability, signaling a movement towards more proficient reading.
For example, evidence from the reading behaviors exhibited by students in Group 1 indicated that they had begun transitioning into the full-alphabetic phase prior to the intervention. They had started developing a full working knowledge of the alphabetic system as well as more advanced segmentation ability, but they were still lagging substantially behind their average performing peers. Their reading was slow and arduous, but they had started to represent full sight words in memory, to use decoding and analogy to read unfamiliar words, and to spell words more accurately. According to Ehri and McCormick (1998), to help students move from “slow deliberate decoding to faster decoding” it is important to provide ample opportunities to practice (p. 152). Specifically, instruction should give opportunities to practice analyzing within-word grapho-phonemic associations, dividing words into smaller units (e.g., syllable, onset-rime, phonogram), working with word families, applying decoding and analogy strategies when reading connected text, and using prediction to confirm reading accuracy (Ehri & McCormick).

Given that the UFLI tutoring program is adapted to the individual needs of the students, instruction was geared towards providing this type of instruction and practice. As a result, students in Group 1 were able to move into the consolidated-alphabetic phase by the end of the intervention, demonstrated by the chunking strategies they were using during lessons. By the end of the intervention, students had not only showed a marked improvement in the rate of CPPM and CSPM, but also the level of reading accuracy during level book reading. At that time, students were reading books at level 20, which corresponds to the end of second grade. This showed that they had caught up to and surpassed their second-grade peers based on the book levels expected for
that grade. By this time, students were able to read more words accurately and automatically, using a more complete knowledge of the alphabetic system, recognizing and using consolidated units (i.e., rimes, syllables, root words, morphemes) to read multisyllabic words. They continued using decoding and analogy to read unfamiliar words, while their sight vocabulary continued to grow (Ehri & McCormick, 1998).

Before the intervention, students in Group 2 performed considerably below students in Group 1 on measures of decoding and word recognition, yet their reading behaviors indicated that each had started the transition into the full-alphabetic phase. One reading behavior characteristic of this transition relates to the type of reading errors made when students decode unfamiliar words. While younger students tend to produce errors that do not resemble target words, students advancing in the development of word reading ability tend to produce errors that resemble the target words, signaling the use of a decoding strategy (Ehri, 2005a). In order to complete the transition in to the full-alphabetic phase, students need instruction in decoding and sight word learning. Specifically, instruction should guide students in processing all the letters in words, instead of just initial or final letters (Ehri, 2005a; Ehri & McCormick, 1998).

With an intervention tailored to their needs, students in Group 2 showed a marked improvement in their rate of CPPM and CSPM, as well as the level of accuracy during book reading activities. At the end of the intervention, students were reading books at level 16, which corresponds to the end of first grade. This shows that the group made the equivalent of one year’s progress after 47 sessions (approximately 3 months). By this time, it seemed that students in Group 2 had completely moved into the full-alphabetic phase and had begun demonstrating reading behaviors indicative of a
transition into the consolidated-alphabetic phase. They had a better knowledge of grapho-phonemic correspondences and were consistently using decoding skills to read and spell unfamiliar words (Ehri, 2005a). Their growing sight vocabulary was apparent during reading and writing activities as well. For example, during reading, students began to cover word parts and read other parts as chunks. Nevertheless, it is important to note that their reading was still slow and laborious. Thus, continued instruction in decoding and sight word reading (Ehri, 2005a) is recommended for them to complete the transition into the consolidated-alphabetic phase.

Prior to the intervention, students in Group 3, the lower performing group, exhibited reading behaviors characteristic of the partial-alphabetic phase. Given their incipient knowledge of letters and sounds and their developing phonemic segmentation ability, they were unable to use basic reading strategies, like decoding, analogy, or sight word reading. This is exemplified by their initial low rates of CPPM and CSPM, as well as their low level of reading accuracy during book reading activities. Ehri and McCormick (1998) identified common mistakes exhibited by students in the partial-alphabetic phase: (a) confusing words that had similar spellings (e.g., think and thank), (b) misreading words by using letter names instead of sounds (e.g., “jo” instead of “go”), (c) guessing words based on partial letter-sound relations and context cues (e.g., house instead of home), (d) reading words backwards due directionality problems (e.g., was instead of saw), (e) misreading words with graphemes (i.e., /cl/ /hl/ /el/ /ls/ /lt/ instead of /ch/ /el/ /ls/ /lt/), and (f) writing words using only salient sounds (e.g., mret instead of market). Students in Group 3 exhibited all these behaviors before the intervention.
develop their word reading skills, these students needed to transition into the full-alphabetic phase.

Juel, Griffith, and Gough (1986) identified four elements needed for this transition: (a) phonemic awareness (segmenting, blending, substitution), (b) exposure to print (text level being read), (c) cipher knowledge (nonword decoding), and (d) sight word knowledge (recognition of misspellings). Given that the UFLI tutoring program addresses these four components, students in Group 3 started making the transition to the full alphabetic phase as the intervention progressed. At first, Jennifer and Jorge were advancing at a faster rate than Aldo. Jennifer and Jorge were acquiring a more complete knowledge of the alphabetic system and were using this knowledge to decode unfamiliar words and to acquire sight words. Initially, their reading was extremely slow and laborious, but with practice it started to become more fluent. Their rate of CPPM and CSPM started increasing at a similar pace and their level of text reading accuracy started to improve. In contrast, Aldo continued having difficulty making letter-sound connections and identifying all the sounds in words. Many of his attempts to read unfamiliar words and high frequency words tended to be unsuccessful. His rate of CPPM and CSPM remained close to zero.

Torgesen (2000) stated that many struggling readers or “treatment resisters” need more intensive intervention. Torgesen further states that many struggling students who are facing severe risk factors may require more than 1 or 2 years of intervention. In a study conducted by Vaughn, Linan-Thompson and Hickman (2003), researchers found that when more intervention was provided and instruction was modified to meet the specific needs of each individual, students responded positively. In the present study,
intervention was modified for Aldo. Starting on session 20, Aldo received 15 extra minutes of instruction, in the form of one-on-one tutoring that took place before his small-group session, focusing on the letter-sound correspondences to be practiced during the small group session. Immediately, he showed a small improvement on CPPM and CSPM. Instead of reading a 0 to 1 CPPM, he started reading between 0 and 2 CPPM. Similarly, he went from reading 0 to 3 CSPM to reading between 2 and 4 CSPM. After 19 sessions of additional tutoring, Aldo made a marked improvement. His rate of pseudoword reading went from a range of 0 to 2 CPPM to a rate of 4 to 6 CPPM. His rate of sight word reading went from a range of 2 to 4 CSPM to a range of 4 to 8 CSPM. This change was also visible during book reading and writing activities. He started segmenting and blending sounds more accurately, and he started showing independent use of self-monitoring and self-correction. These changes were also noticed outside the tutoring sessions. Aldo’s teachers reported that not only was he using reading strategies in the classroom, but for the first time, he was also enthusiastic about reading in class. By the end of the intervention, Aldo started showing reading behaviors typical of the full-alphabetic phase, just like Jennifer and Jorge, which increased his self-confidence.

Despite their substantial improvements, it is important to recognize that students in Group 3 were still performing significantly below their second-grade peers. All three demonstrated urgent need for continued reading intervention, given that they were repeating second grade. Also, given Aldo’s overall performance, administration of other measures could help uncover additional characteristics or the presence of a disability, which might be influencing his progress. Some suggested areas commonly associated
to learning disabilities include phonological processing, working memory, word retrieval, and naming speed (Altmann, Lombardino, & Puranik, 2008).

Prior research makes it clear that students who continue struggling require systematic, explicit instruction in phonemic awareness and phonetic decoding (Ehri & McCormick, 1998; Torgesen, 2000). Furthermore, teachers should provide daily opportunities to read connected text using “easy materials” that can be read with at least 96% accuracy (Allington, 1983, p. 555). Unfortunately, many struggling readers do not have these opportunities in their regular classrooms, as their peers move onto more advanced skills. Without continued intervention that is tailored to the individual needs of these students, it is unlikely that struggling readers will catch up to their higher performing peers.

In contrast to the groups’ response to intervention, Miriam moved to a more advanced phase of word recognition development in considerably less time. At the start of the intervention, she showed reading behaviors typical of an incipient full-alphabetic phase, where she started using decoding strategies to read unfamiliar words, as well as recognizing high frequency words by sight. Still, her reading was slow and laborious. This was demonstrated not only by low rates of CPPM and CSPM, but also by connected text reading during running records. In response to the intense one-on-one intervention, Miriam rapidly moved into the consolidated-alphabetic phase, where she was able to decode larger word units and use those to decode multisyllabic words with accuracy and speed. Her full knowledge of letter-sound correspondences translated into an enhanced sight word reading ability and a more accurate and fluent reading of connected text.
Overall, all students made substantial progress as a result of the intervention. Students in Group 1 are likely to be able to succeed in reading without additional intervention. Students in Group 2 improved considerably but still will likely require additional support to continue making progress. Students in Group 3, despite significant gains, remained well below expected performance for their grade level and will require continued intensive intervention. Similarly to Group 1, Miriam is likely to continue thriving in the classroom without additional intervention.

Relation between CPPM and CSPM

Two important findings concerning the relation between CPPM and CSPM merit further discussion. First, there was a marked difference between the CPPM rate and the CSPM rate for Groups 1 and 2. Throughout the study, both groups consistently had a higher rate of CSPM than CPPM. This finding is consistent with that of Ehri and Wilce (1983), who found that less skilled readers were less able to decode nonsense words than real words. Ehri and Wilce stated that these students are “inaccurate and excessively slow” in decoding nonsense words, and that while practice improved their pseudoword reading speed, it remained slower than real words (p. 15). One possible explanation is that students who lack decoding skills are relying on visual features of words (Gough & Juel, 1991), or they are still relying on visual cue reading strategies characteristic of the pre-alphabetic phase (Ehri, 2002) to compensate for their lack of decoding skills. Second, it was noticeable in all groups that the rate of CSPM increased as the rate of CPPM improved, even though the emphasis of instruction was on decoding. According to Ehri (2005a), this relation is possible because decoding helps build students’ sight vocabulary. When readers develop a working knowledge of the alphabetic system, they use this knowledge to acquire and retain words in memory.
(Ehri, 2005b). This was certainly the case for Group 3, who initially decoded high frequency words and later started recognizing words by sight.

**Interpretation of Supplemental Data**

In addition to data collected during each phase of the single-subject design, supplemental data were collected to provide additional information about the effects of the intervention. Data were collected on students’ early reading skills, attitudes toward reading, and teachers’ ratings of students’ reading ability. What follows is detailed analysis of these data.

**Early Literacy Skills**

Pre- and post-intervention data provide additional support for the effectiveness of the UFLI program on students’ decoding and word recognition skills. These two skills were assessed under untimed conditions (KTEA-II) to evaluate reading accuracy and under timed conditions (TOWRE and DIBELS-NWF) to evaluate reading fluency. The largest improvement in all participants was on decoding accuracy and fluency. This is most likely the result of the program’s prime focus on decoding instruction. Results also showed that students’ ability to recognize words by sight increased after intervention. Instruction also targeted sight word reading, but to a lesser degree. It is possible that the newly acquired decoding skills impacted students’ ability to read words by sight. According to Ehri (2005a), decoding is a “self-teaching mechanism” that supports the acquisition of sight words (p. 149). When students decode unfamiliar words, those words are retained in memory, adding to their growing sight vocabulary.

Another important finding from this study relates to reading fluency. Pre- and post-intervention data on the ORF (DIBELS) showed that all the participants made drastic improvements on their rate of words read per minute. Aldo (Group 3), for example, who
was reading three words per minute at the beginning of the school year and who had
difficult decoding basic VC words, was able to read 12 words per minute after
intervention. Although this was still very weak reading, this change represents a
substantial improvement considering that he was repeating second grade and the
previous year he had read 4 words per minute on the end of year ORF passage.
Dramatic improvements were also observed in other students. Ernesto (Group 2), for
example, went from 25 words per minute to 79 words per minute, while Amelia (Group
1) went from 55 to 102 words per minute.

Reading fluency is a complex construct that encompasses multiple processes and
skills, of which decoding fluency is a significant one (Hudson, Pullen, Lane, & Torgesen,
2009). According to Hudson and colleagues, an inefficient decoding process interferes
with the readers’ ability to read text fluently, given that a considerable amount of energy
is expended trying to decipher unfamiliar words. This was certainly the case for the
participants in this study. Their initial lack of decoding fluency interfered with their ability
to read connected text with accuracy and automaticity. However, once students started
acquiring more efficient decoding processes their ability to read connected text
improved. This was not only reflected in their post-intervention fluency scores, but also
throughout the lessons as they increased their level of reading accuracy of leveled
books.

The benefit of enhanced word reading skills does not stop with improved reading
fluency. It is well known that a close relation exists between fluency and
comprehension. When a reader fails to decode and recognize words automatically,
reading fluency is compromised (Hudson et al., 2009). When reading fluency is
compromised, comprehension suffers. According to LaBerge and Samuels (1979), this is because students are not able to focus their energy on higher order skills, so they are unable to derive meaning from text. Students’ comprehension scores in this study are a perfect example of this connection. Before the intervention, half of the students did not take the QRI-4 because they were not able to read second-grade or even first-grade passages fluently. One student was given a primer level passage and due to his extreme difficulty with decoding and word recognition, he was not able to understand what he was reading. His comprehension scores showed that he was reading at a frustration level. Furthermore, three of the four students whose ORF scores showed low risk for second grade passages, and who were given QRI-4 level two passages, also had difficulties reading words accurately and fluently. His comprehension scores also showed that they were reading at a frustration level according to QRI-4 norms. After intervention, when word level skills improved and fluency rates increased, a development in comprehension ability was readily observed. For example, this time, seven out of ten students were able to read level two passages. Of these students, three were reading at an instructional level and one at an independent level. Moreover, four of the five students who were not given the QRI-4 before intervention, were able to take it after. Two of these students read level two passages and two read primer level passages. This shows that the transition toward a more effective and efficient reading ability had initiated.

Students’ ability to derive meaning from text was also influenced by the program’s high emphasis on reading comprehension development. Each tutoring lesson included activities designed to help students acquire effective comprehension skills. For
example, before the students read a new book, the tutor introduced the book and engaged the group in a discussion of the pictures, with the goal of activating prior knowledge and creating context for the story. Then, as students read the books, they were encouraged to make connections and predictions related to the story. The tutor also modeled and guided students to self-monitor for comprehension. After reading, the tutor and students engaged in a discussion of the story through the use of literal, inferential, and evaluative questions. Children were also asked to summarize part of the story and then write a summary sentence (Hayes et al., 2005; Lane et al., 2005). Finally, the English vocabulary support provided by the tutor throughout each lesson contributed to students’ understanding of what they read (Carlo et al, 2004).

**Attitudes toward Reading**

Another change observed after intervention was an increased positive attitude toward reading. Results from the ERAS showed that at the beginning of the study students did not have strong positive attitudes toward reading, particularly recreational reading. This meant that students preferred reading activities associated with school more than reading for fun outside of school. These findings are most likely associated with students’ history of reading difficulties. Students who have not acquired basic reading skills and who have experienced repeated failure during reading activities are less likely to become motivated and self-regulated readers who are willing to read outside of school (Quirk & Schwanenflugel, 2005).

It is also important to note that despite showing more positive attitudes toward academic than recreational reading at the beginning of the study, their scores placed them considerably below second-grade norms. Quirk and Schwanenflugel (2005) stated that, typically, students who are in remedial reading interventions have already
experienced at least a year of repeated failure associated with reading. Thus, students’
low academic reading attitude scores might have been a reflection of this occurrence.
For example, six of the ten students who were repeating second grade when the study
started were still having trouble reading grade-level books. Unless these students
acquired the necessary reading skills to be successful readers, they would continue to
experience negative attitudes toward reading.

Fortunately, not only did reading skills improved after intervention, but their
attitudes toward academic and recreational reading improved, as well. It is likely that
with successful reading came a heightened sense of self-efficacy, which in turn
translated into a positive disposition for reading (Quirk & Schwanenflugel, 2005). This
connection between reading ability, self-efficacy, and attitudes toward reading was
reflected not only on students’ scores, but also on students’ performance in the tutoring
program and in the classroom. For example, the tutor noted that, initially, there was a
tendency among students to complain and avoid work that was too challenging for
them. As their skills started to improve, students began to participate more and
complain less. For example, at the beginning, Aldo complained when asked to read a
page that had more than one sentence. Toward the end of the intervention, he would
ask to read the whole book by himself. This trend was observed in the other groups, as
well. Students would ask to read more than one page at a time or to read more books.
Teachers also reported that students were volunteering to read in class and were eager
to read more books.

Students’ improved attitudes toward reading may contribute to the lessening of the
Matthew Effect. Stanovich (1986) states that good readers continue to improve more
rapidly than poor readers at least in part because they read more, thereby getting more practice in the skills necessary for improvement. It was evident from their pre-intervention reading achievement and attitude scores that the students in this study were not practicing reading nearly enough. With improved skills and accompanying improved attitudes toward reading, perhaps these students will continue to read more and get the practice they need to close the gap between their reading and that of their peers.

**Teacher Reading Ability Rating Scale (RARS)**

Changes in reading ability were also noticed by students’ classroom teachers. Overall, teachers rated students’ reading abilities higher after intervention. This is very important because it indicated that students’ newly acquired skills were being generalized to the classroom setting. Teachers’ observations of students’ progress were also corroborated through their informal communications with the researcher. A few times, teachers expressed their contentment with students’ increased reading ability and increased levels of participation in class. According to Perry and Meisels (1996), teachers are in a good position to evaluate their students’ achievements because they interact with them on a regular basis.

Still, a closer look at specific tasks within each of the five reading skills showed that, for some students, teachers failed to recognize a change despite students’ marked improvement on the measurements used in the study. Interestingly, some of these teachers expressed on different occasions that their students were still struggling or that they still could not read. This raises the very important issue of how teachers measure progress. In these classrooms, for example, struggling readers were required to read grade-level texts. Students who were performing significantly below grade level before
intervention (e.g., reading primer level passages) and who made considerable growth as a result of the intervention (e.g., reading first grade passages), may not be able to demonstrate this progress when teachers provide reading materials that are still above their reading ability. Furthermore, it is likely that for some teachers it might be difficult to recognize students’ progress because, as Allington (1983) acknowledged, many struggling readers tend to work arduously through any text, even the ones they can read accurately. Allington recommended that struggling readers be given opportunities to read easy materials so that they get to “read more like good readers” (p. 555).

**Social Validity**

Single-subject research helps identify interventions that target socially relevant outcomes (Horner et al., 2005). Demonstrating the social validity or appropriateness (Wolf, 1978) of an intervention is important when working in educational settings (Kennedy, 2005). According to Horner and colleagues, the social validity of a single-subject study is enhanced when teachers and other intervention agents report that procedures are acceptable, feasible, and effective. In this study, the goal was to receive feedback from students and teachers.

**Students’ Responses**

The acceptability of the intervention by direct consumers (Kennedy, 2005), students in this case, is very important because it can influence how they respond to the intervention. The fact that students had positive feelings toward the program might have contributed to their positive disposition throughout the lessons. Most students were eager to work and worked hard to complete all the tasks. Their positive feelings were also reflected in the excitement they showed when the tutor would pick them up in their classroom. Interestingly, Jorge, who refused to work on many occasions and created
distract for other students, reported enjoying tutoring. One possible explanation for his positive response is that tutoring provided an escape from the regular classroom where he frequently got in trouble. Nevertheless, when the work from the tutoring started to get difficult for him, he would get frustrated and immediately engage in covert and overt misbehavior (e.g., making fun of others, ripping books, throwing his pencil or magnetic letters, doing minimal work, not answering questions). For students like Jorge, who are in critical need of support it is important to devise appropriate ways to also help him take control of his emotions and find better ways to express his frustration.

An important finding from the interviews is that students recognized that participating in the tutoring program helped them become better readers. Some students stated that they were reading more, reading better, and reading faster. Jennifer, in particular, said she actually learned to read as a result of the tutoring program. Aldo recognized that he was reading on his own. He said: “Now I read books. You no help much.” The fact that the Aldo was able to sound out words on his own and read faster than before was very motivating for him. Toward the end of the intervention, he repeatedly said that he was reading without the tutors’ help. This finding is relevant given the tendency of struggling readers to have low confidence in their ability to read (Guthrie & Davis, 2003).

In relation to the different components of a UFLI lesson, students had different preferences. Some students liked doing word work with magnetic letters and others preferred reading books. Yet, when asked about their least favorite part, the only activity that was identified by students was writing sentences (Writing for Reading). Some of the reasons given were that it was too hard, too much work, and too tiring. Writing for
Reading involves a lot of work for these students: (a) encoding familiar and unfamiliar words by segmenting and blending, (b) writing sight words by practicing correct spellings, (c) figuring out the appropriate mechanics of writing like capitalization and punctuation, and (d) rereading the sentence created after each work is added. Unfortunately, many of these students were not accustomed to persisting until they could produce a correct sentence, and this probably is why it felt like too much work for them. Fortunately, despite being a challenging program, all participants agreed that other struggling readers should participate in the tutoring lessons.

**Teachers’ Responses**

Given that the intervention was implemented by the researcher, it was important to know what indirect consumers (Kennedy, 2005), in this case the teachers, thought about the intervention. Teachers’ opinions about the acceptability, feasibility, and effectiveness of the intervention (Horner et al., 2005) can influence their decisions about adopting the program and implementing it with ELLs. All teachers agreed that the UFLI program and each of its components can help ELLs become better readers, and that they would be likely to incorporate the UFLI lesson or any of its components in their classrooms. This is relevant given that teachers’ beliefs about the importance of an intervention influence their disposition to adopt and implement new practices (Sparks, 1988). One teacher recognized that one of her students who “couldn’t put two sounds together” at the beginning of the school year, started reading as a result of his participation in the program. Similar comments were expressed by other teachers throughout the study, who started noticing an improvement not long after the intervention started.
Despite all stating that they were willing to implement the program in their classrooms, two teachers reported not being interested in learning how to implement it. One stated that she had a good understanding of it, while the other said that she had done that type of program before. Unfortunately, just being familiar with it or having a good understanding is not enough to ensure appropriate implementation. Participating in professional development is critical for teachers to acquire the necessary knowledge and skills to properly implement the intervention, especially as it addresses the needs of ELLs. It is well documented in the literature that professional development is associated not only with improved instructional practices, but also with students’ learning (Borko, 2004).

Finally, it is important to acknowledge that all teachers reported using similar strategies in their classrooms, particularly repeated reading. Some teachers did progress monitoring, while others did word work, or writing activities. Many of them stated that the SRA/EIR program that they use in their classrooms has some similar activities. Yet, they stated that word work activities did not include manipulative letters and writing activities did not go as in-depth as the UFLI program does. These distinctions could explain the differences in relative effectiveness of the two intervention programs.

Overall, the UFLI program was well received among students and teachers. Moreover, other school personnel (e.g., school principal, reading coach) reported their satisfaction with the program and their desire to use it in the future. They stated that other teachers had heard about students’ progress and were interested in learning
about it. Professional development will be provided by the researcher to all interested teachers.

**Effectiveness of the UFLI Tutoring Program**

There are three plausible explanations or the effectiveness of the UFLI tutoring program. These include: (a) early intervention and language proficiency, (b) provision of instructional practices for ELLs, and (c) consistency with the RTI approach. What follows is a brief description of each explanation and the theoretical foundation behind it.

**Early Intervention and Language Proficiency**

The role of early reading interventions in the prevention of later reading difficulties has been well documented in the literature (Ehri, Dreyer, Flugman, & Gross, 2007; Gersten & Dimino, 2006; Torgesen et al., 2001; Vaughn, Cirino et al., 2006). Early interventions are particularly important given the tendency of struggling readers to fall further and further behind their higher performing peers. According to Gunn and colleagues (2000), students who have not learned to read by the end of third grade are less likely to successfully develop their literacy skills. While Chall (1983) stated that up until third grade the focus of the curriculum is on learning to read and that the focus shifts from “learning to read” to “reading to learn” in fourth grade, in practice and with increased accountability, it seems that this shift occurs much earlier. A close look at the Florida Sunshine State Standards, for example, shows that students in third grade require reading proficiency to fully benefit from the curriculum (FLDOE, 2010d). Therefore, it is critical that struggling readers develop the necessary reading skills in order to successfully complete third grade tasks.

Unfortunately, there is a tendency for educators to delay interventions until non-native speakers develop their English skills or to exclude students with limited English
proficiency because they have lower probabilities of benefitting from interventions (Ashdown & Simic, 2000). These notions have been supported by available literature that underscores how ELLs struggle to understand the words they read (Helman, 2009), and consequently, struggle to comprehend texts (Peregoy & Boyle, 2005). Unfortunately, these approaches limit the opportunities for ELLs to receive the help they need. Furthermore, when educators delay intervention, children get farther behind, making it more difficult for them to catch up to their peers. Consequently, the initial gap that existed between Spanish-speaking ELLs and their English-speaking peers continues to widen, forcing educators to find and implement more intense interventions. Fortunately, there is sound evidence that ELLs benefit from English reading interventions regardless of their level of English oral language proficiency (Gunn et al., 2000, 2002, 2005; LeSaux & Siegel, 2003; Quiroga, Lemos-Britton, Mostafapour, Abbott, & Berninger, 2002; Roberts, 2003; Stuart, 1999).

The present study provided additional support for the use of early reading interventions for ELLs with different levels of oral language proficiency. It also provided evidence that delaying intervention while language proficiency develops is unnecessary. Data showed that all participating students made a marked improvement by the end of the intervention, including students who scored “negligible” in oral language proficiency on the WMLS-R. Out of the ten participants, six had a CALP score of 3, equivalent to limited oral proficiency. Of the six students, three were in Group 1 (higher performing), two were in Group 2 (lower performing), and one was in Group 3 (lowest performing). Furthermore, the two lower performing groups (2 and 3) had at least one member who outscores the higher performing group in level of oral proficiency. Maria, in Group 2,
had a CALP score of 4 (fluent) and Jorge, in Group 3, had a CALP score of 3.5 (limited to fluent). This finding shows that reading ability is not entirely contingent on oral language proficiency. Therefore, there is no compelling reason for delaying literacy instruction and interventions for struggling readers who are learning to read in their second language (Ehri & Roberts, 2006). Perhaps the UFLI program would have been even more effective if it had been implemented earlier. Yet, providing it in second grade was still early enough to remediate and accelerate their learning process.

It should be noted, however, that the fact that students with limited oral language proficiency improved as a result of this reading intervention does not preclude the need for English language development. Oral language proficiency is critical for students’ overall achievement. Developing proficiency in English oral skills should remain a key component of ELL instruction.

**Effective Instructional Practices for ELLs**

Approximately 60% of ELLs in this country are receiving reading instruction in English (August, 2006; Goldenberg, 2008). Recently, the NLP reported that students who have no access to native language instruction can succeed if high quality instruction is provided in their second language (Snow, 2006). According to Gersten and Geva (2003) there are six instructional strategies that are highly effective when working with ELLs: (a) explicit teaching (e.g., model skills and strategies, provides prompts, adjust own use of English during lesson, makes relationships overt); (b) systematic instruction in phonemic awareness, letter-sound correspondence, and decoding; (c) English learning (e.g., uses visuals or manipulatives to teach content, encourages elaborate responses, uses gestures or facial expressions to clarify meaning); (d) vocabulary development (e.g., teaching vocabulary prior to and during a lesson,
provides opportunities to speak English, engages students in meaningful interactions about text); (e) interactive teaching (e.g., maintains students engaged during lessons, incorporates students’ ideas and experiences into lessons, provides sufficient time for students to respond); and (f) instruction geared toward low performers (e.g., promotes response accuracy, opportunities to practice, independent practice, ongoing monitoring of understanding and performance, modifies instruction according to students’ needs).

Furthermore, Helman and Burns (2008) recommend giving students ample opportunities to hear and discuss novel words in context, to connect oral and written forms of words, and to use novel words in students’ own sentences.

The effectiveness of the UFLI tutoring program in promoting the reading skills of ELLs can also be attributed to its compliance with the aforementioned practices. The UFLI tutoring program, as it was originally designed, addressed many of the instructional practices identified by Gersten and Geva (2003) as well as Helman and Burns (2008), given that many of these strategies have also been identified in the literature as effective practices for struggling readers in general (Torgesen, 2002; Vaughn, Gersten, & Chard, 2000). In addition, the UFLI program was modified to support the language needs of Spanish-speaking ELLs. Based on the findings from the pilot study and recommendations from Linan-Thompson and colleagues (2003), the researcher made sure to distinguish between real and nonsense words, use picture cards, and provide quick definitions of unfamiliar words when needed. In addition, based on Mohr and Mohr’s (2007) recommendation, the researcher extended students’ interactions by accepting phrases or partial answers and modeling complete sentences with standard grammar.
These practices were consistently implemented throughout the tutoring session with all groups, and while all students benefitted from these practices, it was observed that students with lower levels of oral language proficiency relied more heavily on them. Anecdotal data showed that Jennifer (CALP 1 – negligible) and Viviana (CALP 2 – very limited) had limited English vocabulary and relied heavily on the use of picture cards and quick definitions. These strategies were consistently used with them during word work, reading, and writing activities. Furthermore, during writing activities, Jennifer, Viviana, and Aldo tended to provide incomplete or grammatically incorrect sentences. In response, the tutor supported them by accepting their answers, rephrasing their ideas into complete and grammatically correct sentences, and asking them to repeat the rephrased sentence before attempting to write it.

**Consistency with the Response to Intervention Approach**

Response to Intervention (RTI) is a multi-tiered educational approach that promotes early identification and early intervention for students who may be at risk for reading difficulties (NRCLD, 2007). This approach provides increasingly intense levels of service (Mellard, 2004) for students who do not respond well to the instruction provided (Vaughn, Wanzek, Woodruff, & Linan-Thompson, 2007). At each level, students benefit from research-based interventions, continuous progress monitoring, and data-driven instruction (NJCLD, 2005). Tier 1 consists of research-based core reading programs that address the needs of the majority of students. Tier 2 offers more strategic and intense interventions in addition to the core reading instruction (approximately 30 minutes more). Tier 3 provides sustained, intensive and scientifically based interventions that are tailored to the specific needs of each individual (McMaster, Fuchs, Fuchs, & Campton, 2005; Vaughn et al., 2007).
In this study, the UFLI program was implemented in addition to the core reading program; thus, it can be considered a Tier 2 intervention. Consistent with the RTI approach, the UFLI program incorporated continuous progress monitoring and data-driven instruction. Based on students’ running records, the tutor determined the area of focus for word work and the level of book reading for that particular lesson. Furthermore, running records and the use of leveled books assisted the tutor in establishing students’ current reading level to make decisions about the need for further intervention. For example, students in Group 1 were able to catch up to grade level (level 20 books) after 38 sessions. At that time, students exited the intervention program and moved back to receiving just Tier 1 instruction.

The RTI model also allows students who do not respond to Tier 2 intervention to receive a more intensive Tier 3 program. It is estimated that between 5% and 10% of students will require Tier 3 interventions (Vaughn et al., 2007). According to Torgesen (2002) available research suggests that multilayered interventions can help reduce the number of students who fail to show adequate reading growth. In this study, for example, one participant (Aldo) remained nonresponsive for the majority of the intervention. As a result of this lack of responsiveness, the researcher decided to provide additional one-on-one instruction for that student. These extra 15 minutes, which could be considered Tier 3 instruction, provided the necessary support to start producing a change in Aldo’s reading ability. This change was observed in an increased CPPM and CSPM, as well as an increased accuracy level in book reading. Furthermore, this improvement was sustained two weeks after the intervention had ended.
Data obtained through Miriam’s one-on-one tutoring also supported the use of UFLI as more intensive Tier 3 intervention for students who are performing below grade level. While groups made substantial progress, Miriam’s advancement was considerably faster than that of the small-group participants, including that of students who started at a higher book level. Specifically, Miriam made the equivalent of a year and a half’s progress in only 26 sessions. This finding is critical for educators that face the challenge of helping students who are significantly below grade level make quick progress in order to catch up to their higher performing peers. It should be noted that, without replication of the one-on-one approach with similar students, it is impossible to know for certain the extent of the role that UFLI played in Miriam’s rapid improvement. However, given that other aspects of her schooling were the same as students in the small-group intervention and given the results of the pilot study and other prior UFLI studies that employed one-on-one instruction, the assumption that one-on-one tutoring produces more rapid gains than small-group tutoring is a reasonable one.

It should be noted that in a true RTI model, the Tier 2 and Tier 3 interventions would have been initiated with these struggling students much earlier in their school career, as soon as progress-monitoring data indicated that they were not keeping up with their peers. Also, it is unclear whether the core reading instruction provided at the school would meet the criteria for “research-based” instruction. Still, even under less than ideal circumstances for implementation, the UFLI intervention proved to be an effective tool that would be appropriate for Tier 2 or Tier 3 in an RTI model.

Implications for Future Research

The results of this study showed that the UFLI tutoring program is an effective English reading intervention for second-grade Spanish-speaking ELLs, who are
struggling to read. Furthermore, these findings are consistent with previous research demonstrating the efficacy of English interventions for struggling English language learners. This study holds several important implications for future research.

One of the main issues with any single-subject design has to do with sample size. Given the limited number of participants in this study, it is important to ensure its external validity; that is, the extent to which the results can be generalized to other participants, places, and conditions (Kennedy, 2005). For this purpose, direct and systematic replications of the study are necessary. Direct replications should be conducted to make sure that these findings generalize to other students who share similar traits with the participants in this study. Also, it is critical to conduct systematic replications by purposely selecting new but dissimilar subjects, settings, and contexts. In particular, systematic replication will help determine whether the findings of this study extend across different school settings, participants, and tutors. Finally, examining the intervention in an experimental control-group design with a larger sample size would be a logical next step to enhance the generalizability of findings.

Since the study was conducted in only one school located in a rural area of North Florida, it is recommended that the UFLI program be examined in different school settings. The effectiveness of the program may be impacted in some way by the characteristics of each particular school. For example, schools may have different schedules that may not allow for daily 45-minute sessions or for extended interventions. Reducing the duration of each session, the frequency of sessions, or the length of the intervention may greatly impact the results.
Similarly, given that the participants in this study were in one school and shared similar traits, it is critical that other studies be conducted to examine how the UFLI program can impact the reading skills of other Spanish-speaking ELLs. There might be within-group differences that can impact students’ response to intervention. Therefore, it is important to know how other groups with different heritages, socioeconomic status, immigration status (i.e., migrants, U.S. residents, U.S. nationals), etc., respond to the UFLI tutoring program.

Future research should also examine the effectiveness of the UFLI program as different types of educators implement it (i.e., mainstream teachers, special education teachers, ESOL teachers, reading specialist, paraprofessionals). According to Kazdin (1982), the characteristics of those implementing a program may influence the intervention effects. For example, in a study conducted by Ehri, Dreyer, Flugman, and Gross (2007) about the effectiveness of a tutoring intervention for language minority students, the researchers compared results across reading specialists, credentialed teachers, and paraprofessionals. One of the findings showed that paraprofessionals did not affect students’ ability to decode pseudowords as well as reading specialists. Ehri and colleagues hypothesize that lack of background knowledge in phonics instruction might have been the reason behind their lower performance. At this point, it is unknown if students’ response to the intervention would differ if the UFLI program was implemented by other professionals, with different levels of knowledge about reading.

Besides replicating the study using single-subject designs, between-group comparisons using quantitative analysis should be conducted to further investigate the effectiveness of the UFLI program in promoting the reading skills of beginning readers.
who are learning to read in English. For example, given that students were able to maintain the decoding and word recognition rates two weeks after the intervention ceased, it is also important to conduct follow-up studies to determine if gains can be sustained for longer periods of time. In addition, it is important to determine whether supplemental data continues to show an improved reading ability.

It is also critical to examine how effective the program is with other ELLs whose native language is not Spanish. While Spanish is the most common language spoken by ELLs, other languages are also represented in the classroom. Klindler (2002) reports that for the year 2000-2001, approximately 10% of students were ELLs and that the most common languages after Spanish were Vietnamese (2%), Hmong (1.6%), Cantonese (1%), and Korean (1%). Therefore, a logical next step would be to test the UFLI program with speakers of other languages. Furthermore, since many ELLs are being instructed in English alongside their native-English speaking peers (Goldenberg, 2008), it would be important to examine the impact of the UFLI program when ELLs and native-English speakers are grouped together.

In this study, data showed that all participants improved in decoding and word recognition skills as a result of the intervention, independent of their initial level of English oral language proficiency. While these results are consistent with previous findings (Gunn et al., 2000, 2002, 2005; LeSaux & Siegel, 2003; Quiroga, Lemos-Britton, Mostafapour, Abbott, & Berninger, 2002; Roberts, 2003; Stuart, 1999; Vaughn et al., 2003), examining the UFLI program with a larger sample would allow researchers to further examine the role of oral proficiency in students’ response to intervention. One
option would be to compare across groups that are not only grouped by reading level, but also by oral language proficiency.

The recent emphasis on the RTI model highlights the importance of identifying effective interventions that can address the growing needs of struggling readers, especially “treatment resisters” or “nonresponders” (Torgesen, 2000). Given that the UFLI program was originally designed for one-on-one tutoring and later adapted for small-group intervention, examining its effectiveness as part of an RTI model has great implications for the fields of reading and special education. The program should be examined as a multilayered approach, first as a Tier 2 intervention (i.e., small group) and then as a Tier 3 intervention (one-on-one; Torgesen, 2002).

Consistent with RTI and the use of more intensive interventions, it is important to evaluate the impact that group size has on the effectiveness of the UFLI program. Given the rapid response of the student receiving one-on-one tutoring compared to students receiving small-group tutoring (almost half the number of sessions as Group 2), it is important to do a cost-benefit analysis. In a cost benefit analysis, researchers can directly compare student achievement in different size groups and the cost of providing interventions in smaller groups or one-on-one.

RTI also highlights the importance of preventing severe reading difficulties by providing early interventions; thus, the UFLI program should also be examined with younger ELLs, starting in first grade. This is pivotal given that first grade struggling students tend to remain poor readers in later grades (Juel, 1988). Furthermore, it is well known that reading problems in older students are more difficult to remediate even when intensive interventions are provided (Torgesen et al., 2001).
Since the UFLI program was originally designed with the intent of training pre-service teachers to become better reading teachers, it would be valuable to investigate the effect that UFLI training and UFLI implementation would have on teachers’ knowledge about reading. Also, it would be helpful to determine if it has an impact on teachers’ instructional practices in the general classroom. In particular, an examination of the effects of the modified version of UFLI implemented in this study on teachers’ knowledge of effective reading intervention for ELLs would be warranted.

It is also crucial that studies be conducted to examine the most efficient ways to expand the implementation of the UFLI program at the school, district, state, and eventually national level. According to Klingner, Ahwee, Pilonieta, and Menendez (2003), educators face many barriers that can keep them from consistently implementing research-based interventions. Some of these barriers include lack of time, lack of support from administrators, mismatch between the interventions, other methods mandated by the district, among others. Therefore, future research should also focus on identifying “what works best, for whom, and under what conditions” (McDonald, Keesler, Kauffman, & Schneider, 2006) so that any scaling-up efforts become feasible.

**Implications for Practice**

The findings from this study have significant implications for educators working with Spanish-speaking ELLs. The UFLI tutoring program is an effective English reading intervention that helps develop the skills of beginning readers who are struggling to read in their second language. Teachers can implement this small-group intervention to supplement their core reading program and address the needs of many students.

It is also important that teachers of ELLs provide interventions for beginning readers that emphasize word reading skills, particularly phonemic awareness and
decoding. Providing explicit and systematic instruction in these two skills are necessary for the development of student’s reading fluency. Interventions should also provide daily opportunities for ample practice reading connected text at an appropriate reading level (Allington, 1983) in order to develop reading automaticity.

The fact that all participants benefitted from the intervention regardless of their initial level of oral language proficiency indicates that educators can provide early interventions to those students who are experiencing difficulties learning to read. This has important implications for practice given the tendency for educators to postpone reading interventions until students develop sufficient oral language proficiency. In accordance with Ehri and Roberts’ (2006) suggestion, there is no compelling reason for delaying reading interventions for ELLs. Students can learn to read while they continue developing English oral proficiency.

Another implication relates to grouping practices and language support. Since students’ reading improvement was closely related to their initial reading level and not to oral proficiency level, teachers can group students with different levels of English proficiency to receive intervention. In doing so, it is also important to incorporate instructional practices that support the varying language needs of ELLs so that everyone attains the maximum benefit.

Findings from this study have particular relevance for schools, given the recent emphasis on RTI. Results show that UFLI is an effective small-group tutoring program that can be used as a Tier 2 intervention for Spanish-speaking ELLs who are not responding adequately to Tier 1 instruction. Its emphasis on progress monitoring and data-driven instruction makes this intervention optimal for RTI. Furthermore, given
Aldo’s response to additional instructional time following the UFLI protocol, teachers can consider using the UFLI program as a Tier 3 intervention, as well. This suggestion is also supported by previous data from the pilot study that examined the UFLI program as a one-on-one tutoring program for Spanish-speaking ELLs. In that study, three first-grade students showed marked improvement on decoding and leveled book reading as a response to intervention.

Conclusion

Children in the United States whose native language is not English are at particular risk for reading difficulties (Snow et al., 1998). While the number of language minority students in the U.S. is growing (Klingner, Artiles, & Barletta, 2006), access to effective bilingual programs (August, 2006; Gomez-Bellenge, Chen, & Schulz, 2008) is limited. Up to 60% of ELLs in the nation are receiving reading instruction in English (August, 2006; Goldenberg, 2008). Because the level of achievement for ELLs is drastically below their monolingual peers, there is a need for effective reading interventions at an early stage (Cartledge et al., 2009; Denton & Mathes, 2003).

Unfortunately, many schools do not provide early interventions because they believe that literacy instruction should be delayed until ELLs develop sufficient oral language proficiency (Ehri & Roberts, 2006; Tabors & Snow, 2002). Fortunately, there is evidence that ELLs who participate in English reading interventions originally designed for monolingual students respond positively despite having limited levels of oral proficiency (Gunn et al., 2000, 2002, 2005; LeSaux & Siegel, 2003; Quiroga, Lemos-Britton, Mostafapour, Abbott, & Berninger, 2002; Roberts, 2003; Stuart, 1999).

These initial findings highlight the importance of identifying English interventions that have proven to be effective with struggling monolingual students and evaluate how
effective they are in promoting the reading skills of developing ELLs. For this purpose, a multiple-baseline design across three groups was used to evaluate the effectiveness of the University of Florida Literacy Initiative (UFLI) small-group tutoring program for Spanish-speaking ELLs who were struggling with reading. The results of this investigation demonstrated that the UFLI tutoring program is an effective reading intervention for second-grade, Spanish-speaking ELLs who are struggling to read in English. Providing an intervention that promotes word reading skills of young learners effectively improves the reading skills of ELLs. Furthermore, the program proved to be effective despite students’ varying levels of English oral language proficiency. These findings contribute to the growing literature on the effectiveness of English reading intervention for struggling ELLs of varying levels of language proficiency. As Ehri and Roberts (2006) state, there is no compelling reason for postponing reading interventions for struggling ELLs.

This study demonstrates that well-designed intervention can support the reading development of struggling students who are also ELLs. Given the evidence generated by this study and others like it, it is essential that schools use what is known to provide appropriate intervention for students with reading and language difficulties. Making this happen may require reallocation of resources, rethinking of intervention models, or additional professional development for teachers, but the need is too great to ignore.
## APPENDIX A
IRB DOCUMENTATION

### UFIRB 02 – Social & Behavioral Research
Protocol Submission

<table>
<thead>
<tr>
<th><strong>Title of Protocol:</strong></th>
<th>Reading Tutoring Program for Spanish-Speaking Second Language Learners</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Principal Investigator:</strong></td>
<td>Stephanie Arriaza</td>
</tr>
<tr>
<td><strong>UFID #:</strong></td>
<td>7307-1770</td>
</tr>
<tr>
<td><strong>Degree / Title:</strong></td>
<td>Ed.S. in Counselor Education</td>
</tr>
<tr>
<td><strong>Department:</strong></td>
<td>Department of Special Education, School Psychology and Early Childhood</td>
</tr>
<tr>
<td><strong>Mailing Address:</strong></td>
<td>1403 Norman Hall, P.O. Box 117050, Gainesville, FL 32611-7050</td>
</tr>
<tr>
<td><strong>Email Address &amp; Telephone Number:</strong></td>
<td><a href="mailto:satienza@ufl.edu">satienza@ufl.edu</a>, (352) 870-7056, Fax (352) 392-2655</td>
</tr>
<tr>
<td><strong>Co-investigator(s):</strong></td>
<td></td>
</tr>
<tr>
<td><strong>UFID #:</strong></td>
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<tr>
<td><strong>Supervisor:</strong></td>
<td>Dr. Holly Lane</td>
</tr>
<tr>
<td><strong>UFID #:</strong></td>
<td>7493-7920</td>
</tr>
<tr>
<td><strong>Degree / Title:</strong></td>
<td>Ph.D. in Special Education/Associate Professor</td>
</tr>
<tr>
<td><strong>Department:</strong></td>
<td>Special Education, School Psychology and Early Childhood</td>
</tr>
<tr>
<td><strong>Mailing Address:</strong></td>
<td>1403 Norman Hall, P.O. Box 117050, Gainesville, FL 32611-7050</td>
</tr>
<tr>
<td><strong>Email Address &amp; Telephone Number:</strong></td>
<td><a href="mailto:hans@coe.ufl.edu">hans@coe.ufl.edu</a>, 352-273-4268</td>
</tr>
<tr>
<td><strong>Date of Proposed Research:</strong></td>
<td>August 2009- August 2010</td>
</tr>
<tr>
<td><strong>Source of Funding:</strong></td>
<td>(A copy of the grant proposal must be submitted with this protocol if funding is involved): Unfunded</td>
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**Scientific Purpose of the Study:**
This study will examine the effectiveness of a modified version of “University of Florida Literacy Initiative” (UFLI) tutoring program in developing the skills necessary for proficient reading among struggling readers in second grade who are Spanish-speaking second language learners.

**Describe the Research Methodology in Non-Technical Language:** (Explain what will be done with or to the research participant.)
This study will use a multiple baseline design across four groups to assess the effects of the UFLI program (Attached). The multiple baseline design consists of 5 phases, pre-baseline assessment, baseline, intervention, maintenance, and post-baseline assessment. (Each phase is described below). Movement through each phase is as follows. All students are assessed individually during pre-test assessment. Baseline data collection begins on all students at the same time. When group #1 shows at least 3 data points that are stable (there is no increasing
or decreasing trend in the behavior) intervention will begin. The other three groups continue in baseline. When group #1 shows improvement in the behavior for at least 3 consecutive sessions, group #2 will begin intervention, while group #3 and #4 continue on baseline. The cycle is repeated for group #3 and #4. Intervention will cease when each group has reached the appropriate reading level as indicated by the data or when students complete 40 tutoring sessions. Data will be collected for the maintenance phase at two weeks post intervention. Maintenance will have been achieved if at least 3 consecutive data points indicate that the group has remained at the appropriate reading level. At the end of maintenance phase, the post-test assessment phase will take place, where each student will be assessed individually.

The UFLI tutoring program is designed to develop the skills necessary to develop proficient reading among struggling readers. This intervention will be provided by the Principal Investigator, who is trained in UFLI and is literate in Spanish and English.

Sixteen Spanish-speaking second language learners in second grade, who are identified as 'at risk' students based on their latest end-of-year "Dynamic Indicators of Basic Early Literacy Skills" (DIBELS), the Stanford Achievement Test - 10 (SAT-10), along with a Test of Invented Spelling (Lane & Pullen, 2004) and regular attendance records will be selected to participate. Selected participants will be grouped based on similar reading abilities. What follows is a description of each phase of the multiple baseline design:

In the prebaseline phase, students will be given pretest measurements of English Language Proficiency, Spanish Language Development, Vocabulary Development, Early Literacy Skills, classroom behavior, and Motivation for Reading. English and Spanish Language Proficiency and vocabulary will be measured by the Woodcock Munoz Language Survey-Revised (English and Spanish Versions), individually administered tests of oral language, language comprehension, reading, and writing. Early Literacy Skills will be measured in English, using the "Dynamic Indicators of Basic Early Literacy Skills" (DIBELS) (http://dibel.org), a nationally standardized, individually administered measure of early literacy development; the Florida Assessment for Instruction in Reading (FAIR), a state-wide standardized, individually administered measure of early literacy development; the Stanford Achievement Test -10 (SAT-10), a nationally standardized test of academic achievement; the Test of Word Reading Efficiency (TOWRE), an standardized, individually administered test of word reading accuracy and fluency; Kaufmann Test of Educational Achievement-II (KTEA-II); Nonsense Word Decoding and Letter-Word Recognition subtests only; the Invented Spelling Assessment (Lane & Pullen, 2004), an individually administered test of invented spelling; and the Qualitative Reading Inventory-4 (QRI-4), an individually administered measure of reading (Comprehension); and a running record (Clay, 1972), an individually administered measure of connected text reading. Motivation will be measured using the Elementary Reading Attitude Survey (ERAS), a group or individually administered normed instrument designed to measure students' attitudes toward reading.

In addition, teachers of the participating students will be asked to complete two scales: (a) Reading Ability Rating Scale, a researcher created scale that requires them to rate each of their students on different reading skills (See attachment), and (b) The Conners Abbreviated Teacher Rating Scale (ATRS), a individually administered rating of student classroom behavior.

Assessment will be scheduled in cooperation with the students' teachers. Depending on what assessments have been completed by the school, the assessment time will range from 1 to 3 hours per student, with an average of 90 minutes per student expected. It is expected that the school will have data available for the DIBELS, SAT-10, Invented Spelling Assessment, and FAIR. Because these children are young, it may be necessary to do the assessment in multiple sittings. Testing will be completed at the child's school.

In the baseline phase, individual decoding and fluency baseline scores will be collected using researcher created sight word and non-word fluency probes (a sample is attached). Each data collection session will last approximately 3-5 minutes per group, one to four times a week.

During the intervention phase, each group will participate in 25 to 40, 45-minute small group tutoring lessons, four to five times a week. The lessons will take place at appropriate school hours or after school programs when necessary, without interfering with instructional time. Each session will follow a structured format that involves
four steps outlined in the UFLI manual. The four steps require students to read familiar and new appropriate books, do decoding and spelling with magnetic letters, and write sentences related to the readings (See UFLI Manual attached for a more detailed description). To measure response to intervention, data will be collected one to four times a week using researcher created sight word and non-word fluency probes (3-5 minutes per group).

The maintenance phase will start two weeks after the intervention stops for each group. At this time, data will be collected using the sight word and non-word fluency probes one to four times a week to determine if the skills attained during the intervention phase were sustained after the intervention ceased. Once three stable data points are achieved, the maintenance phase will end.

The post-intervention assessment phase will take place once all intervention groups have ended their maintenance phase. Each participant will be given post test measures of English and Spanish Language Proficiency, Vocabulary Development, Early Literacy Skills, classroom behavior, and Motivation for Reading. The measures will be the same that were applied in the pre-baseline phase and under the same conditions. In addition, students will respond to a social validity questionnaire at the end of the intervention (See attachment). Also, teachers will be asked to complete the Reading Ability Rating Scale and the Conners Abbreviated Teacher Rating Scale. Furthermore, teachers will be invited to observe a 45-minute long videotape of a UFLI group session and then complete a researcher created social validity questionnaire (see attachment).

In addition to student data, parents will be asked to complete a researcher created home language survey at the beginning of the study. The survey will later be sent along with a letter that explains the survey. The survey and the letter will be provided in English and Spanish (See attachments).

The study is expected to start in August and continue until the end of the school year, depending on the number of sessions each participant requires to meet baseline, intervention, and maintenance criteria.

**Describe Potential Benefits and Anticipated Risks:** (If risk of physical, psychological or economic harm may be involved, describe the steps taken to protect participant.)

There are no anticipated risks associated with participation in this project. The potential benefit for students who participate in the study is the development of skills necessary for proficient reading.

**Describe How Participant(s) Will Be Recruited, the Number and AGE of the Participants, and Proposed Compensation:**

Up to 70 students will be identified by their teachers as candidates for tutoring, based on their latest end-of-year reading scores (DIBELS and SAT-10), beginning of second grade Invented Spelling Assessment scores, and their English language learning status. These students will be sent home with a consent letter to be screened by the researcher and to participate in this study. Students who receive parental consent and whose records show regular attendance and low percentage of tardiness for the previous academic year will be selected to participate in the study. It is anticipated that 15 students will be selected to participate.

The participants will be selected based on the following criteria: Spanish-speaking second language learners in second grade at Suwannee Elementary School, Suwannee County, between the ages of 7 to 10 years old, be considered ‘at-risk’ for reading based on their last DIBELS, SAT-10 scores, and Invented Spelling Assessment, and demonstrate regular attendance and low percentage of tardiness. In case that more than 16 students meet eligibility, school personnel will be asked to assist the researcher in selecting participants.

There will be no compensation for participating in this study.

**Describe the Informed Consent Process. Include a Copy of the Informed Consent Document:**

Parental informed consents will be sent home with students who have been identified by their teachers as possible candidates for the study. Up to 70 students will take home the consent letter which asks parents or legal guardians permission for students to be screened and to participate in this study, as well as consent to be sent the Home Language Survey. These consent letters will be provided in Spanish and English to ensure that
parents have access to the information.

A second parental informed consent will be sent with students who were selected to participate in the study. This consent asks parents for authorization to let their child participate in a videotaped session of the UFLI tutoring program that will be shown only to school personnel with the purpose of establishing the program’s social validity. Of those who provide consent, only 3 to 4 students will participate in the videotaped session. The consent forms will be sent in Spanish and English.

In addition, an assessment assent and a small-group tutoring assent will be read to the participants (See attachment). This assent forms will be provided in English and Spanish. The Spanish versions of the parental informed consent and student assent were created by the Principal Investigator, who is a native speaker of Spanish.

<table>
<thead>
<tr>
<th>Principal Investigator(s) Signature:</th>
<th>Supervisor Signature:</th>
</tr>
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<tbody>
<tr>
<td>Stephanie Argoth</td>
<td></td>
</tr>
<tr>
<td>Department Chair/Center Director Signature:</td>
<td>Date: 02/25/2010</td>
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</table>
Dear Parent/Guardian,

I am a graduate student in the Department of Special Education, School Psychology, and Early Childhood, at the University of Florida, conducting research on reading skills of early elementary, Spanish-speaking, second language learners. I am conducting this study under the supervision of Dr. Holly Lane. The purpose of this study is to determine the effectiveness of a modified version of the “University of Florida Literacy Initiative” (UFLI) tutoring program in helping struggling readers whose first language is Spanish and are learning to read in English to develop appropriate reading skills. The results of the study may help educators identify effective reading strategies to help other second language learners to read better. This study can also help your child to improve his/her reading skills. With your permission, I would like to ask your child to volunteer for this study.

If you give your consent for your child to participate in this study, first I will assess your child’s language, reading skills, classroom behavior, motivation for reading, and school attendance and tardiness records to see if he/she qualifies for the tutoring program. In some cases, the school might already have language and reading scores, as well as attendance and tardiness records, in which case I would like to ask your permission to access your child’s records and use that information. The assessment session will be done at your child’s school and will take from 90 minutes to 3 hours.

Students who are selected will participate in approximately 25-40 small-group tutoring lessons. Some groups will start tutoring in the first half of the school year, while others will start in the second half of the school year. Each lesson will last approximately 45 minutes and will take place four to five times a week. I will be conducting each lesson at a time when your child’s teacher thinks is best. I may also meet with your child after school, if he/she attends any at school programs. Your child will not miss important instructional time and will be allowed to make-up any work required by the teacher. This study is expected to start in August and continue until the end of the school year. At the end of the study, we will assess your child’s language, reading skills, and motivation for reading once again.

We would also like to send you a “Home Language” survey for you to answer at home. This survey includes a few questions about your child’s language background and language activities that take place at home. This information will help us better understand and support your child’s learning. If there are any questions that you feel uncomfortable answering, you are not required to do so. Refusing to answer any questions will not affect your child in any way. An envelope will be provided for you to send back the survey with your child.

Your child’s identity as well as your identity will be kept confidential to the extent provided by law. We will replace your name as well as your child’s name with code numbers or a false name. Individual and group results will only be reported using the code numbers or the false names provided. Only Dr. Lane and I will have access to your child’s information. Participation or non-participation in this study is voluntary and will not affect your child’s grades or placement in any programs.

You and your child have the right to withdraw permission for your child’s participation at any time without consequence. There are no anticipated risks for participating in this study. Anticipated benefits include the improvement of reading skills. No compensation is offered for your child’s participation. Results of this

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study will be available in August 2010 upon request. If you have any questions about this research protocol, please contact me at (352) 870-7056 or my faculty supervisor, Dr. Holly Lane, at (352) 273-4268. Questions or concerns about your child’s rights as research participant may be directed to the IRB02 office, University of Florida, Box 112250, Gainesville, FL 32611-2250, phone number (352) 392-0433.

Stephanie L. Arriaza

I have read the procedure described above. I voluntarily agree to allow my child, ____________________________, to participate in Stephanie Arriaza’s study of the effectiveness of the modified version of the “University of Florida Literacy Initiative” tutoring program among Spanish-speaking second language learners. I also authorize them to send me the “Home Language” survey. I have received a copy of this description.

Parent / Guardian __________________________ Date

2nd Parent / Witness __________________________ Date

Approved by
University of Florida
Institutional Review Board 02
Protocol # 2008-U-0725
For Use Through 07-27-2010
Estimado Padre de Familia/Guardián,

Yo soy una estudiante en el Departamento de Educación Especial, Psicología Escolar y Niñez Temprana, en la Universidad de la Florida, cursando actualmente un doctorado. Estoy conduciendo una investigación sobre habilidad de lectura de los estudiantes de primaria que están aprendiendo inglés y cuyo primer lenguaje sea el Español. Estoy realizando esta investigación bajo la supervisión de la Dra. Holly Lane. El propósito de este estudio es determinar la efectividad de una modificación del programa de tutoría llamado “University of Florida Literacy Initiative” (UFLI) (Iniciativa de Lectura de la Universidad de la Florida) para mejorar la lectura de los estudiantes cuyo primer lenguaje es el Español, que actualmente están aprendiendo en inglés y que tienen dificultad para leer.

Los resultados de esta investigación pueden ayudar a los educadores a identificar estrategias de lectura que faciliten el desarrollo de la lectura en este grupo de estudiantes. Este estudio también puede ayudar a su hijo/hija a mejorar su habilidad para leer. Con su permiso, quiero pedirle a su hijo/hija que participe en esta investigación.

Si usted da su autorización para que su hijo/hija participe en este estudio, primero voy a evaluar el lenguaje, la habilidad de lectura, el comportamiento en clase, la motivación de lectura, y el record de asistencia y tardanzas de su hijo/hija para determinar si califica para el programa de tutoría. Es posible que la escuela ya haya evaluado el lenguaje y habilidad de lectura de su hijo/hija. Así mismo, la escuela tiene los registros de asistencia y tardanza de su hijo/hija. En este caso, quisiera pedir su autorización para tener acceso a record escolar de su hijo/hija y usar esa información. La sesión de evaluación tendrá lugar en la escuela de su hijo/hija y durará entre 90 minutos y 3 horas.

Los estudiantes que sean elegidos participaran en alrededor de 25-40 sesiones de tutoría en grupo. Algunos grupos comenzaran la tutoria en la primera mitad del año escolar, mientras otros grupos comenzaran en la segunda mitad del año escolar. Cada lección durara aproximadamente 45 minutos y tendrá lugar 4 o 5 veces a la semana. Yo conduciré las lecciones en horas que el maestro/maestra de su hijo considere apropiadas. Es posible que se trabaje con su hijo al acabar el día escolar, en caso de que su hijo/hija participe en algún programa después de la escuela. Su hijo/hija no perderá tiempo importante de clases y podrá ponerse al día en el trabajo que el maestro/maestra requiera.

Este estudio está planeado para comenzar en Agosto y continuar hasta el final del año escolar. Al final del estudio, volveremos a evaluar el lenguaje, la lectura, y la motivación para leer de su hijo/hija.

También queremos mandarle una encuesta titulada “Lenguaje en el Hogar,” la cual usted podrá completar en su casa. Esta encuesta incluye algunas preguntas sobre el uso de lenguaje en su hogar. Esta información será de utilidad para nosotros pues nos ayudara apoyar de mejor manera el aprendizaje de su hijo/hija. Si usted no se siente cómodo contestando algunas de las preguntas, no está obligado a responderlas. Esto no afectara a su hijo/hija de ninguna manera. Al terminar la encuesta, usted podrá mandarla de regreso con su hijo/hija en el sobre que se le proporcionara.

Su identidad y la de su hijo/hija serán mantenedas de forma confidencial, como lo requiere la ley. Sus nombres serán remplazados con un código numérico o un nombre falso. Los resultados individuales y de grupo serán reportados únicamente usando el número o el nombre falso asignado a cada participante. Soloamente la Dra. Lane y yo tendremos acceso a la información de su hijo/hija. La participación o no participación en este estudio es voluntaria y no afectara de ninguna manera las calificaciones o asignación de su hijo/hija en ningún programa académico.

Usted y su hijo tienen el derecho a retirarse de esta investigación en cualquier momento, sin sufrir ninguna consecuencia. La participación en esta investigación no presupone ningún riesgo. Se espera que un beneficio de esta investigación sea mejorar la habilidad de lectura de su hijo/hija. No se ofrece ninguna compensación económica por participar en este estudio. Los resultados de esta investigación estarán disponibles a partir de Agosto.

The Foundation for The Gator Nation
EQUA OPPORTUNITY INSTITUTION
del 2010 para quien los solicite. Si usted tiene alguna pregunta sobre esta solicitud, por favor contactarme en el (352) 870-7056 o a mi supervisora, Dra. Holly Lane, en el (352) 273-4268. Cualquier pregunta sobre los derechos de su hijo/hija como participante de esta investigación pueden ser dirigidas a la oficina del UFIRB, University of Florida, Box 112250, Gainesville, FL 32611-2250, número de teléfono (352) 392-0433.

Stephanie Arriaza

Yo he leído el procedimiento descrito en esta carta. Voluntariamente, doy mi consentimiento para que mi hijo/hija __________________________ participe en el estudio conducido por Stephanie L. Arriaza sobre la efectividad del programa modificado de tutoría “Iniciativa de Lectura de la Universidad de la Florida” (University of Florida Literacy Initiative) en estudiantes que están aprendiendo inglés y cuyo primer lenguaje es el Español. Asimismo, autorizo a que me manden la encuesta titulada “Lenguaje en el Hogar.” Yo he recibido una copia de esta solicitud.

Padre de Familia/Guardián __________________________ Fecha __________________________

Padre de Familia/Testigo __________________________ Fecha __________________________

Approved by
University of Florida
Institutional Review Board 02
Protocol # 2009-U-0725
For Use Through 07-27-2010

PAGE 2 OF 2
Dear Parent/Guardian,

As you remember, at the beginning of the school year you gave consent for your child to participate in a study that evaluates the effectiveness of a modified version of a tutoring program called "University of Florida Literacy Initiative" (UFLI). Your child was then selected to participate and since then has received small group tutoring.

As we finish the program, I wanted to ask your permission for your child to be videotaped during one group tutoring session. The purpose of the videotape is to show school personnel what a typical tutoring session looks like so that they can evaluate the program. They will also give their opinion on whether or not they would like to use the program in the future. Teachers and school personnel will focus solely on the tutoring program and not on your child's performance. At the end of the study, the tape will be erased.

Your child's identity will be kept confidential to the extent provided by law. Besides school personnel, only I and my supervisor, Dr. Lane, will have access to the videotape. There are no known risks or immediate benefits to the participants. No compensation is offered for participating in this videotaped session. Participation or non-participation in this videotaped session is voluntary and will not affect your child's grades or placement in any programs.

If you have any questions about this videotaped session, please contact me at (352) 870-7056 or my faculty supervisor, Dr. Holly Lane, at (352) 273-4258.

Stephanie Amigo Arriza

Stephanie L. Arriza

I have read the procedure described above. I voluntarily agree to allow my child, __________________, to participate in a videotaped group tutoring session of the "University of Florida Literacy Initiative" tutoring program. I have received a copy of this description.

Parent / Guardian ___________________ Date ________________

2nd Parent / Witness __________________ Date ________________

Approved by
University of Florida
Institutional Review Board 02
Protocol # 2009-U-0725
For Use Through 07-27-2010

The Foundation for The Gator Nation
An Equal Opportunity Institution
Estimado Padre de Familia/Guardián,

Como recordará, al inicio del año escolar usted dio su consentimiento para que su hijo/hija participara en una investigación para determinar la efectividad de una modificación al programa de tutoría llamado "University of Florida Literacy Initiative" (UFLI) (Iniciativa de Lectura de la Universidad de la Florida). Su hijo/hija fue elegido para participar y desde entonces ha recibido tutoría en grupo.

Al aproximarse el final del programa de tutoría, yo quisiera pedir su autorización para grabar en video a su hijo o hija durante una de las sesiones de tutoría. El propósito de este video es poder mostrar al personal de la escuela como son las sesiones de tutoría para que ellos puedan evaluar el programa. Ellos también darán su opinión sobre la posibilidad de usar el programa en el futuro. Las maestras y personal de la escuela se enfocarán solamente en el programa de tutoría y no en el desempeño de su hijo o hija. Al final del estudio, el video casete será borrado.

El nombre de su hijo/hija será mantenida de manera confidencial, como lo requiere la ley. Además del personal de la escuela, solamente mi supervisora, Dra. Lane y yo tendremos acceso al video casete. No se anticipa ningún riesgo o beneficio inmediato para los participantes. No habrá compensación por participar en esta grabación. La participación o no participación en la grabación de tutoría es voluntaria y no afectará de ninguna manera las calificaciones o asignación de su hijo/hija a ningún programa académico.

Si tiene alguna pregunta sobre esta grabación de video, por favor contácteme al teléfono (352) 870-7056 o a mi supervisora, la Dra. Lane al teléfono (352) 273-4268.

Stephanie L. Arriaza

Approved by
University of Florida
Institutional Review Board 02
Protocol # 2009-U-0725
For Use Through 07-27-2010

Yo he leído el procedimiento descrito en esta carta. Voluntariamente, doy mi consentimiento para que mi hijo/hija __________________________________ participe la grabación de una sesión de tutoría en grupo del programa de tutoría “Iniciativa de Lectura de la Universidad de la Florida” (University of Florida Literacy Initiative). Yo he recibido una copia de esta solicitud.

Padre de Familia/Guardián __________________________ Fecha __________

Padre de Familia/Testigo __________________________ Fecha __________
Child’s Intervention Assent Form (English and Spanish versions)

Hi, my name is Stephanie Arriaza, and I’m from the University. I would like to do some reading activities with you and work with sounds and letters. We will be working together for a few weeks. You can earn stickers for participating and you can stop working at any time. I also want you to know that whatever you decide, this will not affect your grades. Would you like to work with me?

Hola, mi nombre es Stephanie Arriaza y vengo de la Universidad. Me gustaría hacer algunas actividades de lectura contigo y trabajar con letras y sus sonidos. Estaremos trabajando juntos por algunas semanas. Tendrás la oportunidad de ganar calcomanías y podrás parar de trabajar cuando tu lo desees. También quiero que sepas que si decides dejar de participar esto no afectara tus calificaciones. Quieres trabajar conmigo?

Child’s Assessment Assent Form (English and Spanish versions)

Hi, my name is Stephanie Arriaza, and I am from the University. We will work together for about an hour today and maybe an hour some other day. We will do some reading activities and respond to some questions in English and Spanish. You can earn stickers for participating and you can stop working at any time. I also want you to know that you can stop working at any time. I also want you to know that whatever you decide, this will not affect your grades. Would you like to work with me?

Hola, mi nombre es Stephanie Arriaza y vengo de la Universidad. Vamos a trabajar juntos alrededor de una hora al día de hoy y posiblemente una hora otra día. Vamos a hacer algunas actividades de lectura y contestarás algunas preguntas en inglés y español. Tendrás la oportunidad de ganar calcomanías y podrás parar de trabajar cuando tu lo desees. También quiero que seas que si decides dejar de trabajar, esto no afectara tus calificaciones. Quieres trabajar conmigo?
APPENDIX B
HOME LANGUAGE SURVEY AND REMINDER LETTERS

Home Language Survey

Child’s name: _________________________  Child’s age: __________________________

Your name: ___________________________  Today’s date: __________________________

**Household Demographics**

What is your relationship to the child?  mother ______  father ______  other _________________

What is your ethnicity/nationality? ________________________________________________________

How many people live in your household? ________  What are their ages? _________________

How long have you lived in your current home? ___________________________________________

How many years has your child been in school in this country? _____________________________

What is your highest level of education?

______  Did not complete high school

______  Completed high school or equivalent

______  Community college

______  Obtained undergraduate degree

______  Other ________________________________

**Home Language Practices**

How many languages are spoken at home? __________

Specify which language are spoken at home ______________________________________________

Which language do you use to interact with your child? _________________________________

Do you use different languages for different purposes?  Yes ____  No ____.  Specify __________

____________________________________________________________________________________

Do you consider yourself a fluent speaker of English? Yes ___  No ___

Is there anything else about your child’s language or literacy development that you’d like to add?
Lenguaje en el Hogar
Encuesta

Nombre del niño(a):_________________________ Edad del niño(a):_________________________

Nombre del Padre/Madre:___________________ Fecha de hoy: __________________________

Información General

Cuál es su parentesco con su hijo/hija? madre ______ padre ______ otro__________________

Cuál es su nacionalidad? ________________________________________________________________

Cuantas personas viven en su hogar? ________________ Que edades tienen? __________________

Cuanto tiempo ha vivido en su actual casa? _________________________________________________

Cuanto años ha estado su hijo en la escuela en este país? _______________________________________

Cuál es el nivel más alto de educación que usted tiene?

[ ] No complete el bachillerato/preparatoria/high school

[ ] Complete el bachillerato/preparatoria/high school

[ ] Estudio Técnico

[ ] Licenciatura

[ ] Otro ________________________________

Actividades de Lenguaje en el Hogar

Cuantos idiomas o lenguajes se habla en su hogar? __________

Especifique que idiomas o lenguajes se hablan en su hogar____________________________________

Con que idioma o lenguaje usted se comunica con su hijo/hija?________________________________

Usa usted diferentes lenguajes para diferentes propósitos? Si ____ No ____.

Especifique___________________________________________________________________________

Considera usted que habla el idioma Ingles? Si ___  No ___

Hay algo más que usted quisiera agregar acerca del desarrollo del lenguaje y escritura de su hijo o hija?
Dear Parent/Guardian,

As you remember, you recently gave consent for your child to participate in a study that evaluates the effectiveness of a modified version of the “University of Florida Literacy Initiative” (UFLI). By doing so, you also agreed to receive a “Home Language” survey for you to complete at home. I am attaching the survey in English and Spanish. Please feel free to answer one of the two, whichever is more comfortable for you. If there are any questions that you do not feel comfortable answering, you don’t have to answer them. Once you complete the survey, please place it in the envelope provided, seal it, and send it back to school with your child.

Your and your child’s identity will be kept confidential to the extent provided by law. We will replace his/her name and your name with code numbers or pseudonyms. Results will only be reported using participants’ numbers or pseudonyms. Only I and Dr. Lane will have access to your and your child’s information. Participation or non-participation in this survey is voluntary and will not affect your child’s grades or placement in any programs.

If you have any questions about this research survey, please contact me at (352) 870-7056 or my faculty supervisor, Dr. Holly Lane, at (352) 273-4268.

Stephanie Arias Atiga
Stephanie L. Ariasa

Approved by
University of Florida
Institutional Review Board 02
Protocol # 2009-U-0725
For Use Through 07-27-2010

The Foundation for The Gator Nation
EQUAL OPPORTUNITY INSTITUTION
Estimado Padre de Familia/Guardián,

Como recordara, hace poco usted dio su consentimiento para que su hijo/hija participara en una investigación para determinar la efectividad de una modificación al programa de tutoría llamado “University of Florida Literacy Initiative” (UFLI) (Iniciativa de Lectura de la Universidad de la Florida). Al dar su consentimiento, usted también dio su autorización para recibir una copia de la encuesta “Lenguaje en el Hogar” para que usted complete en su hogar. En esta ocasión le mando la encuesta en Inglés y en Español. Por favor elija una de las dos para completar, la cual sea mas cómoda para usted. Si hay algunas preguntas que usted no se siente cómodo respondiendo, no tiene que responderlas. Al terminar la encuesta, por favor póngala en el sobre adjunto, cierre el sobre, y mándela al colegio con su hijo/hija.

Su nombre o el de su hijo/hija será mantenida de manera confidencial, como lo requiere la ley. Su nombre será remplazado con un código numérico o un pseudónimo (nombre falso). Los resultados del estudio serán reportados únicamente usando el número asignado a cada participante o el pseudónimo (nombre falso). Solamente yo o la Dra. Lane tendremos acceso a su información y la de su hijo/hija. La participación o no participación en la encuesta es voluntaria y no afectara de ninguna manera las calificaciones o asignación de su hijo/hija a ningún programa académico.

Si tiene alguna pregunta sobre esta encuesta, por favor contacteme al teléfono (352) 870-7056 o a mi supervisora, la Dra. Lane al teléfono (352) 273-4268.

Stephanie L. Arruza

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The Foundation for The Gator Nation
EQUAL OPPORTUNITY INSTITUTION
APPENDIX C

TEACHERS’ READING ABILITY RATING SCALE (RARS)

READING ABILITY RATING SCALE

<table>
<thead>
<tr>
<th>Student</th>
<th>Teacher</th>
<th>Date</th>
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</thead>
</table>

Please rate your student’s ability to perform the following reading tasks by circling one of the numbers on the scale (1 = very weak, 4 = very strong) for each item.

**Phonological Awareness**

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<tr>
<th>Task</th>
<th>1</th>
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<tbody>
<tr>
<td>Detect individual sounds in words</td>
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<tr>
<td>Segment sounds in words</td>
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<td>Blend sounds to form words</td>
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**Phonics**

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<tr>
<td>Decode simple words (e.g., cat, boat)</td>
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<tr>
<td>Decode more complex words (e.g., multisyllable)</td>
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<tr>
<td>Spell simple words</td>
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<tr>
<td>Spell more complex words</td>
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<td>Read high frequency words by sight</td>
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<td>Use context clues to figure out words</td>
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**Fluency**

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<tr>
<td>Read words accurately in connected text</td>
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<td>Read words quickly in connected text</td>
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<tr>
<td>Read text with inflection and expression</td>
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<tr>
<td>Read connected text on grade level</td>
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<tr>
<td>Self-monitoring to check for accuracy</td>
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<tr>
<td>Self-correcting reading errors</td>
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**Comprehension**

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<tr>
<td>Make predictions about a story.</td>
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<tr>
<td>Make personal connections to the story.</td>
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<tr>
<td>Summarize text.</td>
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<td>Engage in discussions of a story or text read.</td>
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<tr>
<td>Comprehend grade level texts.</td>
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**Vocabulary**

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<tr>
<td>Comprehend English words while reading</td>
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<td>Use English vocabulary in speech</td>
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<tr>
<td>Use English vocabulary in writing</td>
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**Classroom behaviors**

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<tr>
<td>Participate in class</td>
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<td>Use English to communicate in class</td>
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<tr>
<td>Motivation to read</td>
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**Additional comments about your student’s reading or language abilities:**
APPENDIX D
UFLI SMALL GROUP SESSION GUIDE

UFLI Small-Group Session Guide

STEP 1: GAINING FLUENCY & MEASURING PROGRESS

☐ Select and read 1-3 familiar books
☐ Have students pair-read a familiar book while taking running record
☐ Present book from previous session to student
☐ Take running record while child reads
☐ Provide feedback regarding self-corrections you observed

STEP 2: WORD WORK WITH MANIPULATIVE LETTERS

☐ Hand out magnetic boards and magnetic letters to each student
☐ Do word work with familiar words

STEP 3: INTRODUCING & READING A NEW BOOK

☐ Introduce the new book
☐ Coach students through the text
☐ Discuss the story
☐ Work with new words
☐ Record strategies used and focus of word work

STEP 4: WRITING FOR READING

☐ Elicit and record sentences
☐ Ask each student to write their own sentences (check for spelling)
☐ Work on each word, while coaching students
APPENDIX E
UFLI SMALL-GROUP SESSION NOTES

Date: ________________    Session time _______ to _______    New book level:_______
Absentees: ______________

Step 1: Gaining Fluency & Measuring Progress
Familiar Book Level/Title
________________________________________    ___________________________________

Running Record book title/level ___________________________________________________
Running Record Student _____________________________    Accuracy _________%
Observations

Step 2: Word Work
Areas of focus for word work:

words decoded                         words encoded

ELL accommodations:

Step 3: Introducing and Reading a New Book
Book Level/Title

Strategies introduced/practiced:

Working with new words:

ELL accommodations:
Step 4: Writing for Reading

Student __________________________ Sentence ________________________________

Student __________________________ Sentence ________________________________

Student __________________________ Sentence ________________________________

Student __________________________ Sentence ________________________________

ELL accommodations:

Session Observations:
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<td>pash</td>
<td>pef</td>
<td>tig</td>
<td>voy</td>
</tr>
<tr>
<td>lav</td>
<td>goft</td>
<td>rell</td>
<td>baf</td>
<td>beash</td>
</tr>
<tr>
<td>tane</td>
<td>parb</td>
<td>zow</td>
<td>beal</td>
<td>leat</td>
</tr>
<tr>
<td>sape</td>
<td>plup</td>
<td>shog</td>
<td>moz</td>
<td>vame</td>
</tr>
<tr>
<td>nuz</td>
<td>slig</td>
<td>nep</td>
<td>korsh</td>
<td>drup</td>
</tr>
<tr>
<td>flaf</td>
<td>yabe</td>
<td>wope</td>
<td>yin</td>
<td>dod</td>
</tr>
<tr>
<td>vake</td>
<td>waib</td>
<td>wut</td>
<td>belp</td>
<td>keb</td>
</tr>
<tr>
<td>jath</td>
<td>dosh</td>
<td>doon</td>
<td>trin</td>
<td>sev</td>
</tr>
</tbody>
</table>
snill puzz vake vop dosh
plup naz meab snop rox
keef jit huz taz gake
hup boz pef leat dush
korsh flaf shan tig pash
waib cham mox stup zot
slig joad beash tusp yabe
gerf doil yud sev bipe
zid nuz zeck grup rell
shog bim fay wut dreck
live had these like four
wash going both after give
would their which please your
come one off first myself
about some done around white
many never keep thank her
how before use them over
because pull right found best
would think have funny once
what its came just under
upon goes would those live
give pull your both had
off some sleep why just
one don’t jump work come
very funny let buy think
again first have once going
green pretty them got wish
sit could brown found much
cold would ask best been
keep what like know write
round  their  much  because  like
fast  were  have  had  upon
wash  any  those  walk  off
which  again  buy  open  myself
give  over  take  sing  under
let  wish  use  before  been
why  got  funny  these  work
five  stop  how  pull  where
right  pretty  both  together  about
does  done  best  sleep  keep
her could because pull where
best look goes first funny
cold made take green don’t
have always much their again
from what right let pretty
please done gave there like
around live think open thank
been upon were which found
walk any many had call
after some once them jump
round had work what look
use wish those its call
sing these five together gave
green many off walk goes
wash pretty going bring open
found before ate why first
her best some myself were
under thank came cold does
upon every there ask know
just got buy brown always
green live them buy after
work four done wash their
wish round from five about
stop please own have made
does goes one once always
around cold these going jump
were never both what know
ask ate bring upon sit
come came sing open off
gave could pull why because
could much both just jump
white funny how got what
come these buy any why
were ate always write away
after take sleep stop came
before ask read goes going
work think pull look four
every once off cold its
use where please done your
wish their upon thank first
some about these open why
going green let found could
bring round just off upon
right after again goes which
would had never myself always
many cold write funny together
how please gave there jump
every those from live its
five got very once don’t
your their work before read
# APPENDIX H
## TREATMENT INTEGRITY CHECKLIST

Treatment Integrity Checklist

<table>
<thead>
<tr>
<th>Group No.</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observer</td>
<td>School:</td>
</tr>
</tbody>
</table>

## STEP 1: GAINING FLUENCY & MEASURING PROGRESS

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>The tutor provided appropriate books (within a 2-level range from the current new book level; read with 90% accuracy or better).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students read familiar books.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students were paired up for reading while tutor took a running record</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor completed a running record with one student using yesterday’s new book.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor analyzed student’s strategies/errors.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor determined book level based on accuracy.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor provided feedback about strategies used by the child.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## STEP 2: WORD WORK WITH MANIPULATIVE LETTERS

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutor handed out a magnetic board and magnetic letters to each student</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor led students in word work with familiar words/spelling patterns</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decoded words at the onset/rime level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encoded words at the onset/rime level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decoded words at the phoneme level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encoded words at the phoneme level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used real words</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Used nonsense words</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor helped students locate word(s) from their word work in the text.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor identified which words were real words and which words were nonsense words.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor made comparisons between English and Spanish words and sounds.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor used picture cards to illustrate unfamiliar word meanings.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### STEP 3: INTRODUCING & READING A NEW BOOK

<table>
<thead>
<tr>
<th>Activity</th>
<th>YES</th>
<th>NO</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>The tutor introduced the book and discussed the story.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor led students in discussion about illustrations.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor promoted student involvement in discussion.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor pointed out repetitive language.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor used vocabulary from story.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor used picture cards or gave quick definitions of unfamiliar words.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor helped students make predictions about the story.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The tutor coached students through the book.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor prompted strategy use.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor encouraged students to re-read sentences after decoding a word.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor used word work (with manipulative letters or dry-erase boards) to introduce new words or spelling patterns.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### STEP 4: WRITING FOR READING

<table>
<thead>
<tr>
<th>Activity</th>
<th>YES</th>
<th>NO</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutor elicited a sentence from each student based on the new book.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor recorded each sentence.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor asked each student to write their own sentence on the writing book</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student coached each student</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sight words were practiced appropriately (1-3 words)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elkonin boxes were used appropriately (2-4 words)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students read and reread their sentence as each word was added.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### PROCEDURES

<table>
<thead>
<tr>
<th>Activity</th>
<th>YES</th>
<th>NO</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutor worked with every student in the group.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor started the session on time</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Session did not exceed 45 minutes.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor had all the materials ready ahead of time.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tutor handled materials with ease.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Observations:
APPENDIX I
SOCIAL VALIDITY INSTRUMENTS

Student Interview

1. How do you feel about participating in the tutoring lessons?

2. Do you think that these lessons helped to become a better reader? How?

3. What part of the lesson was your favorite? Why?

4. What part of the lesson was your least favorite? Why?

5. How do you feel about working in small groups?

6. Will you use what you learned from the lesson in your reading?

7. Do you think other students should participate in the tutoring lessons?
Teachers’ Social Validity Questionnaire

Thank you for participating in the evaluation of a UFLI tutoring lesson. Your opinion about the tutoring program and procedures will help us improve the lessons and procedures followed with English language learners (ELLs). Your identity will be kept confidential. If you have any questions, please contact Stephanie Arriaza at (352) 870-7056 or send an email to satienza@ufl.edu.

As you observe the tutoring lesson, please use the lesson handout as a guide and respond to the following questions.

**Repeated Reading of Familiar Books**
1. Do you feel that this part of the lesson will help ELLs develop reading skills? Why or why not?  Yes  No

2. Do you believe that this component is easy to implement with ELLs? Why or why not?  Yes  No

3. Currently, do you use a similar strategy when you work with English language learners?  Yes  No

4. Would you be likely to use a strategy like this one with ELLs during your reading instruction? Please explain.  Yes  No

**Progress monitoring**
5. Do you feel that this part of the lesson will help ELLs develop reading skills? Why or why not?  Yes  No

6. Do you believe that this component is easy to implement with ELLs? Why or why not?  Yes  No

7. Currently, do you use a similar strategy when you work with English language learners?  Yes  No

8. Would you be likely to use a strategy like this one with ELLs during your reading instruction? Please explain.  Yes  No
**Word work with magnetic letters**

9. Do you feel that this part of the lesson will help ELLs develop reading skills? Why or why not?  
   Yes  No

10. Do you believe that this component is easy to implement with ELLs? Why or why not?  
    Yes  No

11. Currently, do you use a similar strategy when you work with English language learners?  
    Yes  No

12. Would you be likely to use a strategy like this one with ELLs during your reading instruction? Please explain.  
    Yes  No

**Reading a new book**

9. Do you feel that this part of the lesson will help ELLs develop reading skills? Why or why not?  
   Yes  No

10. Do you believe that this component is easy to implement with ELLs? Why or why not?  
    Yes  No

11. Currently, do you use a similar strategy when you work with English language learners?  
    Yes  No

12. Would you be likely to use a strategy like this one with ELLs during your reading instruction? Please explain.  
    Yes  No
Writing for Reading
13. Do you feel that this part of the lesson will help ELLs develop reading skills? Why or why not? Yes No

14. Do you believe that this component is easy to implement with ELLs? Why or why not? Yes No

15. Currently, do you use a similar strategy when you work with English language learners? Yes No

16. Would you be likely to use a strategy like this one with ELLs during your reading instruction? Please explain. Yes No

Overall tutoring lesson
17. Do you feel that the tutoring lesson can help ELLs develop reading skills? Why or why not? Yes No

18. Do you believe that this lesson is easy to implement? Why or why not? Yes No

19. Would you be willing to implement the lessons in your classroom? Yes No

20. Would you be willing to implement components of the lesson in your classroom? Yes No

21. Would you be interested in learning how to implement this tutoring program? Yes No

22. Do you think other teachers of ELLs might be interested in learning to implement this program? Yes No
APPENDIX J
UFLI INDIVIDUAL TUTORING SESSION GUIDE

University of Florida Literacy Initiative
Tutoring for Beginning Readers
Session Guide

Step 1: Gaining Fluency
- Select and read 1-4 familiar books (3-4 minutes)
- Work with familiar words (3-4 minutes)
- Record observations and focus of word work

Step 2: Measuring Progress
- Present book from previous session
- Take running record while child reads (2-3 minutes)
- Provide feedback regarding self-corrections you observed
- Quickly discuss story

Step 3: Writing for Reading
- Elicit, record, and code sentence (30 seconds)
- Work on each word, while coaching student (8-9 minutes)
- Cut apart and reassemble yesterday’s sentence (1 minute)

Step 4: Reading a New Book
- Introduce new book (1-2 minutes)
- Coach student through new book (6-7 minutes)
- Discuss story (30 seconds)
- Work with new words (2 minutes)
- Record strategies used and focus of word work

Step 5: Extending Literacy
- This step will take 2-8 minutes, depending on genre selected.
- Introduce genre to student
- Demonstrate use, read to or with student
- Record genre, text, & focus
LIST OF REFERENCES


Engelmann, S., & Engelmann, K. (2004). Impediments to scaling up effective comprehensive school reform models. In T. Glennan, S. Bodilly, J. Galegher, & K. Kerr (Eds.), *Expanding the reach of education reforms: Perspectives from leaders in the scale-up of educational interventions* (pp. 107-133). Santa Monica, CA: RAND.


BIOGRAPHICAL SKETCH

Stephanie Arriaza de Allen was born and raised in Guatemala city, Guatemala in 1975. She attended a bilingual k-12 school and graduated with an English/Spanish High School degree in 1992. She earned her bachelor’s degree in psychology from the Universidad del Valle de Guatemala in 2000. She came to the United States in 2000 as an international student and completed one year of English as a second language courses at the University of Florida and Santa Fe College in order to prepare for her graduate studies.

In 2001, she was accepted into the Master of Education and Educational Specialist degree in counselor education at the University of Florida. She completed the program in 2004 with a focus on school counseling. Towards the end of the program, she completed three field experiences in elementary schools where she worked with students who were experiencing emotional and behavioral difficulties. Many of these students were English language learners. As she conducted individual and small-group counseling, she realized that many of their issues stemmed from academic difficulties, particularly in the area of reading. An interest in learning about struggling readers and effective ways to serve them developed from these observations. She decided to pursue a master’s degree in Special Education at the University of Florida to learn how to help students become successful readers. At the time, her plan was to return to Guatemala and serve the special education community in that country. As the master’s program progressed and she learned about effective reading intervention for struggling readers and the particular needs of English language learners, her passion for helping grew stronger and stronger. Toward the end of the master’s program, she decided to
apply to the Special Education doctoral program at the University of Florida. In 2006, she was accepted and awarded an alumni fellowship to complete her studies.

During the four year program, she focused on literacy development, reading disabilities, early interventions, and English language learners. While completing her course work, she had the opportunity to co-teach and teach undergraduate and graduate level courses in literacy, reading disabilities, bilingual special education, and family involvement. She worked in research projects related to literacy and teacher education. She has published an article in a peer reviewed journal. She has been a reviewer and a presenter in several state and national conferences. In 2007, she was awarded second place for best paper presented at the Language and Globalization: Policy, Education, and Media Conference at Georgetown University. Other awards received include the "Outstanding International Student Award" for the College of Education, as well as certificates for excellence in academic achievement offered by the International Student Center at the University of Florida.

In 2010, she graduated with a Ph.D. in Special Education. Her professional goals include teaching at the university level and becoming a national and international consultant for the prevention of reading difficulties and the promotion of effective reading interventions for all struggling readers. She also plans to open a tutoring center for underprivileged children who are in need of reading support.