

SUPPLEMENTAL EARLY LITERACY INTERVENTION FOR FIRST GRADE
ENGLISH LANGUAGE LEARNERS IN BILINGUAL EDUCATION:
DEVELOPMENT AND OUTCOMES

A DISSERTATION

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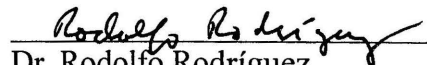
To the Dean of the Graduate School,

I am submitting herewith a dissertation written by Annette del C. Torres Elías entitled 'Supplemental early literacy intervention for first grade English language learners in bilingual education: development and outcomes'. I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the Doctor of Philosophy with a major in reading.


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DEDICATION

I wish to dedicate this dissertation to my darling husband Enrique and my beloved children Michelle Annette, Nicole Annette and Enrique Gabriel for their unconditional love, patience, support, and understanding throughout this long process. Thanks for standing by me. Everything I do is for you and because of you. You are the center of my universe. *Los amo con toda mi alma, vida, y corazón.*

ABSTRACT

ANNETTE DEL C. TORRES ELIAS

SUPPLEMENTAL EARLY LITERACY INTERVENTION FOR FIRST GRADE ENGLISH LANGUAGE LEARNERS IN BILINGUAL EDUCATION: DEVELOPMENT AND OUTCOMES

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Academic success is closely connected to early literacy development. The literature is replete with evidence that early intervention is an effective instructional response for students who struggle in learning to read and write. Current knowledge, however, is based primarily on research conducted with monolingual English language speaking student populations. We know very little about the effectiveness of early literacy interventions for English language learners (ELLs). This information is needed to provide the best start in reading and writing for all students.

The purpose of this quantitative study was to examine the outcomes of supplemental early literacy intervention for first grade ELLs in bilingual education through the study of the *Descubriendo la Lectura* and the Accelerated Reading Instruction models. The research questions guiding this study were as follows: What are the outcomes of first grade supplemental early literacy intervention delivered in Spanish on the literacy development of bilingual students? What are the differences and/or similarities in the outcomes of two interventions: Accelerated Reading Instruction and *Descubriendo la Lectura*? In order to answer these questions, a post-hoc research

approach was used to assess the pre-post outcomes of two interventions. Three independent school districts in the state of Texas provided a setting in which to gather information for 335 students. Archival data were collected on three outcome variable instruments for three intervention groups and a random sample group of students who did not receive an intervention. Data analysis included descriptive and inferential statistical techniques to examine and compare group and student outcomes.

Results indicate that students who participated in supplemental reading intervention made significant gains. The students who were identified as struggling learners in need of intervention at the beginning of the school year made comparable or better progress than the students who did not need an intervention at the beginning of the year as measured by end of the year assessments. This information provides academicians and practitioners a better understanding of the outcomes of supplemental early literacy intervention in a bilingual education setting.

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CHAPTER I

INTRODUCTION

Academic success is closely connected to early literacy development. Children who have difficulty learning how to read and write in the primary grades are likely to continue having difficulty in school (Stanovich, 1979; Stanovich & West, 1979; Juel, 1986). The difficulties of first graders who struggle in reading and writing compound over time and tend to habituate ineffective patterns of reading behavior that make subsequent remedial intervention less successful (Clay, 1987). Alternatively, students who benefit from an early literacy intervention are able to return to the average reading group of their peers where they can continue to benefit from strong classroom reading and writing instruction without the need for lengthy remedial responses (Clay, 1987; Gaffney & Askew, 1999; Askew, Kaye, Frasier, Mobasher, Anderson & Rodríguez, 2002).

The importance of early literacy intervention for monolingual English speakers has been extensively documented (Gredler, 1997; Shanahan & Barr, 1995; Pikulski, 1994; Iversen & Tunmer, 1993; Pinnell, Lyons, DeFord & Bryk, 1994; Madden, Slavin, Karweit, Dolan, & Wasik, 1991; Shanahan & Barr, 1995; Aldridge, 2004; Center, Wheldall, Freeman, & Outhred, 1995; O'Connor & Simic, 2002; Mathes, Denton, Fletcher, Anthony, Francis, Schatschneider, 2005). Current knowledge, however, is based

primarily on research conducted with monolingual English language speaking student populations. We know very little about the effectiveness of early literacy interventions delivered in the native language for English language learners (ELLs) (Neil & Kelly, 1999; Ashdown & Simic, 2000; Cheung & Slavin, 2005).

Research findings indicate that the most efficient pathway into literacy is a child's native language (Escamilla, 1998; Thomas & Collier, 2001; Snow, Burns & Griffin, 1998). Literacy knowledge in the native or first language forms a solid foundation of concepts and skills that transfer to literacy in a second language (Cummins, 2004). Additional research that addresses early reading instruction for ELLs, however, is needed in order to provide the best start in literacy for all students (August & Hakuta, 1997, 1998; Fitzgerald, & Cummins, 1999; Hakuta, 2000).

Statement of the Problem

Hispanic students, in particular, Hispanic ELLs, are leaving school at alarming rates (Valenzuela, Fuller, & Vasquez, 2006). Research shows that students who struggle with early literacy are very likely to continue to have difficulty in school. Students reading below grade level are likely to be retained one or more times during their school years. These retention patterns may have negative consequences for their academic achievement and may even result in school failure (Slavin, Karweit, & Wasik, 1993). The majority of high school dropouts can be predicted by their early literacy problems (Walker, 1995). Considering the alarming dropout rates of Hispanic ELLs it is imperative

that educators identify and implement successful practices to support this group of students early in their development.

There are a number of studies indicating that academic achievement gaps found in the literacy progress of minority students, particularly ELLs, may be prevented or diminished when students have the opportunity to participate in effective supplemental early literacy intervention (Escamilla, Loera, Ruíz, & Rodríguez, 1998; Cheung & Slavin, 2005). Additional information exploring the outcomes of supplemental early literacy intervention in Spanish is necessary in order to inform best practices (Rodgers, Wang & Gómez-Bellengé, 2004; Snow, Burns, & Griffin, 1999).

Purpose of the Study

While there is abundant work in the area of supplemental early literacy intervention for monolingual English-speaking students, the information regarding effective early literacy intervention for Spanish-speaking students in bilingual first grade is extremely limited (Fitzgerald & Cummins, 1999; Alanís, Munter, & Villamil-Tinajero, 2003; Vaughn, Mathes, Linan-Thompson, & Francis, 2005). Additional research is needed that addresses the outcomes of bilingual early literacy intervention programs.

The purpose of this quantitative study was to examine and compare the outcomes of supplemental early literacy intervention models for first grade ELLs in bilingual education through the study of the *Descubriendo la Lectura* and the Texas Education Agency (TEA) Accelerated Reading Instruction models.

Research Questions

The following research questions guided the study:

1. What are the outcomes of first grade supplemental early literacy intervention delivered in Spanish on the literacy development of bilingual students?
2. What are the differences and/or similarities in the outcomes of two interventions: Accelerated Reading Instruction and *Descubriendo la Lectura*?

A post-hoc approach was used to assess the pre-post outcomes of 335 Hispanic first grade ELLs in bilingual education, 252 of whom received supplemental early literacy intervention and a comparison group of 83 of their peers. Three independent school districts in the state of Texas provided a setting for this research study. Archival data were collected on three outcome variable instruments for three intervention groups and a random sample group of students who did not receive an intervention. Data analyses included descriptive and inferential analyses.

Justification and Background of the Study

The dropout rate of Hispanic ELLs in the state of Texas is a problem of immense proportions. Sixty percent of Hispanic students in Texas leave the school system before graduating from high school; moreover, 50 percent of ELLs in the state of Texas leave school between ninth and tenth grade (Johnson, 2006; Valenzuela, Fuller & Vásquez, 2006). In 2004-2005, 96 percent of the total limited English proficient students (LEP) dropouts were Hispanic (PEIMS, 2006).

The Texas Assessment of Knowledge and Skills (TAKS) is an elementary and secondary standardized test used in the state of Texas to assess student attainment in the areas of math, English, science, reading, and social science (TEA, 2006). Results of these tests are reported yearly and provide evidence that the achievement gap in all areas and particularly in the area of reading between LEP students and non-LEP students grows wider for each grade level. An analysis of TAKS reading scores reported by TEA for the years 2005 and 2006 clearly indicates that LEP students are not achieving competency to the same degree as their peers. These gaps will be further explained in Chapter II.

It is imperative that effective support systems be provided at every grade level for ELLs so that they can be successful in school. These systems must include careful analysis of student outcomes if they are to impact achievement. The earlier those systems are in place the more successful they will be.

Effective support systems must address the main causes for student failure in the primary grades when difficulties are detected. Research indicates that early literacy difficulty is the main cause for student retention and dropout (Snow, Burns, & Griffin, 1998). Therefore, it is critical for ELLs who are struggling with early literacy to receive intervention as soon as possible because without additional support their chances to graduate from high school are uncertain.

A growing body of research confirms the effectiveness of early literacy intervention programs (Shanahan & Barr, 1995; Ross, Smith, Casey, & Slavin, 1995; Wasik, 1997; Slavin et al., 1998; O'Connor & Simic, 2002). Supplemental early literacy

intervention programs in Spanish are designed to support students in bilingual education settings who are encountering difficulty with reading and writing. These interventions supplement the work in reading and writing that is taking place in the classroom and are part of a comprehensive literacy plan.

Intervention Models

Supplemental early literacy intervention is an effective instructional response for students who struggle with reading and writing. Two early literacy intervention models: *Descubriendo la Lectura*® and Accelerated Reading Instruction are responses that are currently provided by a number of districts to Spanish-speaking first graders in bilingual education programs in the state of Texas. These models were selected for this study because they provided a unique context for extending our knowledge regarding the outcomes of early literacy intervention programs offered to Spanish-speaking first graders.

Early literacy intervention programs are part of a Texas, U.S.A. comprehensive public school district effort to support early literacy success for ELLs. *Descubriendo la Lectura* and Accelerated Reading Instruction use the students' native language to supplement classroom initial reading instruction in bilingual education settings and gather data about student outcomes. Early reading instruction in the native language fosters success in literacy and supports academic growth (Cummins, 2004).

This post-hoc study examined and compared the outcomes of two supplemental early literacy intervention models for first grade ELLs in bilingual education:

Descubriendo la Lectura and Accelerated Reading Instruction. The existing archival data collected for each student by the districts for program evaluation and reporting for the 2005-2006 school year provided a context to study student outcomes. The theoretical perspectives of *Descubriendo la Lectura* and Accelerated Reading Instruction differ greatly. These two supplemental early literacy intervention models will be described below and their theoretical differences will be further explained in Chapter II.

Accelerated Reading Instruction

The Accelerated Reading Instruction intervention is a component of the Texas Reading First Initiative. It identifies students who are struggling with reading and writing in the early grades K-5 through ongoing assessments and provides accelerated supplemental small group reading intervention. The results of the assessments selected from the TEA Commissioner's Approved List of Early Reading Diagnostic Assessments are the primary criteria for student identification. Additional funding is given to school districts to finance these programs (TEA, 2005).

Student identification stems from the assessments administered at the beginning of the school year. The state requires the administration of assessments as specified by the Commissioner's Approved List of Early Diagnostic Assessments. These tests are the primary criteria for student selection for Accelerated Reading Instruction.

Teachers. Teachers facilitating these groups are required to be highly qualified according to the criteria established by the No Child Left Behind Act (NCLB) (U.S. Department of Education, 2001); this means they must be certified professionals and

licensed in the areas of instruction for which they have been hired. Districts are encouraged by the TEA to use only certified teachers to deliver instruction and provide intervention and are cautioned not to use paraprofessionals for these purposes. Additional teachers may be hired for the implementation of this intervention.

Lessons. Students participating in Accelerated Reading Instruction receive systematic, intensive and targeted tutoring in the areas of need assessed by the test during regular school hours. These areas include phonological awareness, alphabetic principle, decoding, fluency, vocabulary, and comprehension. Lessons take place throughout the school year and may include a summer program for students who continue to have difficulty at the end of the school year. Identified students receive 30-45 minutes of targeted reading instruction during the school day. The lessons are delivered in flexible small groups of up to four children. Teachers are encouraged by the three participating districts to use small group reading instruction techniques. They are also required to provide direct and systematic instruction in the areas of phonological awareness, alphabetic principle, decoding, fluency, vocabulary, and comprehension.

According to district literacy coordinators, teachers develop and implement their own lesson plans based on these guidelines. A typical Accelerated Reading Instruction lesson follows a small group guided reading format. It includes 30 to 45 minutes of targeted reading instruction to provide direct intervention in meeting the instructional needs of the students in the group. The tutors use materials from the campus literacy

library to select books based on the instructional reading and interest levels of the students.

Reports. Texas school districts are required to submit reports that include information regarding the Accelerated Reading Instruction intervention program operation and effectiveness.

Descubriendo la Lectura

The Ohio State University founded the first Reading Recovery University Training Center in the U.S.A. and shortly thereafter the *Descubriendo la Lectura* Collaborative was formed in partnership with the Tucson School District in Arizona. Because of the urgent need to support the rapidly increasing population of ELLs, the *Descubriendo la Lectura* Collaborative expanded to include the already existing Reading Recovery Center at Texas Woman's University.

The *Descubriendo la Lectura* program operates in close collaboration with the school through the supervision of a site coordinator and a teacher leader who are responsible for the overall program implementation. In addition, each district has the support of a university training center. The university training center is responsible for the professional development of the teacher leaders, the monitoring of program implementation, and for program evaluation.

First graders who are identified by their teachers as having difficulty with reading are administered the *Instrumento de Observación* at the beginning of the school year. The results of this assessment are used in conjunction with the classroom teacher's lowest-to-

highest ranking of the first grade class in terms of reading ability to determine which students should be selected for intervention. The goal of this procedure is to provide supplemental literacy instruction to the lowest-ranking 20 percent of the first graders in that particular school.

The students selected are provided with one-to-one individualized tutoring. The teacher works with four students during the *Descubriendo la Lectura* portion of the day, tutoring each child individually for 30-minute sessions. Each child's program lasts an average of 12 to 20 weeks. As these students complete their programs, their slots are filled by the next lowest-ranking students.

Teachers. Typically, *Descubriendo la Lectura* teachers are certified and experienced bilingual teachers who have other responsibilities during the remaining portion of the day. *Descubriendo la Lectura* teachers receive a full year of training in a practicum setting that includes graduate level work and six hours of university credit. After their initial one year of training is completed, teachers participate in ongoing professional development designed to deepen their understanding of early literacy development and instruction and to assist them in working with their students.

Lessons. The *Descubriendo la Lectura* lessons center around the reading and writing of continuous text. The teaching resources necessary for the program are as follows: a variety of books that have been leveled according to their difficulty in terms of their syntactic, semantic, and orthographic characteristics, magnetic letters, a magnetic casel, blank sentence strips, markers and a notebook or paper for writing.

A typical one-to-one, 30-minute lesson, includes several components: reading familiar books, a running record of a book introduced and read the previous day, letter work and word work using magnetic letters, the writing of a story, the cut-up of the written story (transcribed onto a sentence strip by the teacher after the child has written it in her/his notebook) and the reading of a new book. Although these components will be the same for all students in the *Descubriendo la Lectura* program, the quality of the teacher/child interaction, the book selection, the tasks, the nature of the procedures selected, and overall teaching decisions will be different for each child.

Reports. School districts participating in *Descubriendo la Lectura* are required to present yearly reports at the campus and district level. Additional reports are written at the state and national level by the Reading Recovery/*Descubriendo la Lectura* University Center at Texas Woman's University and the Ohio State University National Data Evaluation Center.

Students who have the opportunity to receive additional support in the form of intervention can accelerate their progress and return to the average group of their peers in a short period of time, where they can continue to benefit from regular classroom instruction without the need for long-term remediation (Pinnell et al, 1994).

This research studied the outcomes of students who participated in these two supplemental early literacy intervention models. The two models described above are currently employed in several districts in the state of Texas. The terms defined in the following section will be helpful in understanding the study.

Definition of Terms

Literacy - Literacy is the ability to interact with meaningful and specific messages in written or oral form. It is a complex, constructive, psycho-linguistic, social, and cultural activity that draws on cognitive processes and systems that utilize visible and invisible sources of information in a flexible and integrated way (Clay, 2001; Goodman 1994; Poplin, 1988; Rumelhart 1994).

Bilingual Education - Bilingual education is defined as the use of two languages in a program of instruction, the native language and a second language. Most of the literature reviewed for this study addresses Spanish as a first or native language and English as the second language (Krashen, 1996; Cummins, 2004).

Early Literacy Intervention - Early literacy intervention refers to intensive, short-term, supplemental literacy tutoring in kindergarten, first and/or second grade combined with good classroom reading instruction in order to support and accelerate the progress of students who are finding difficulty in early literacy (Clay, 1985).

Descubriendo la Lectura- Descubriendo la Lectura is the Spanish reconstruction of Reading Recovery, an early literacy intervention model that provides supplemental and accelerated individualized instruction to first grade students who are struggling with reading and writing (Clay, 1987; Escamilla, Loera, Ruíz, & Rodríguez, 1998).

Accelerated Reading Instruction- The Accelerated Reading Instruction intervention is a component of the Texas Reading First Initiative that identifies students who are struggling with reading and writing in the early grades K-5 through

ongoing assessments and provides accelerated supplemental small group reading intervention (TEA, 2001).

English Language Learner- ELLs (ELL) are students who have a native language other than English and are learning English as a second language. State definitions and reports use the term Limited English Proficient (LEP) student. LEP implies that the student has been identified and served in English as a second language or bilingual education program of instruction. Since the LEP label may denote a deficit connotation, the term ELL will be used in this study unless state reported data is being presented (Valenzuela, Fuller & Vásquez, 2006).

Significance of the Study

This study is significant in its unique focus on the outcomes of supplemental early literacy intervention programs for Spanish speaking ELLs who are enrolled in a bilingual education first grade setting. There is a dire need for additional information regarding early intervention for first grade ELLs receiving initial literacy instruction in their native language (Cheung & Slavin, 2005). The results of this study add to the research base regarding the initial early literacy development of first graders receiving early literacy instruction in Spanish. In addition, the information gleaned from this study offers practical applications, as it can be useful in the design of programs to serve this group of students.

Limitations of the Study

All Texas school districts that offered both *Descubriendo la Lectura* implementation and the Accelerated Reading Instruction model in 2005-2006 (a total of 12 school districts) were invited to participate in this study. Six districts expressed an interest in participating but due to challenges dealing with staff availability and local responsibilities three were able to gather the necessary data. Therefore, not all districts with both intervention models in the state of Texas were included. For this research study data was collected and analyzed for three school districts and 26 schools in the state of Texas. The study included only the *Descubriendo la Lectura* and the Accelerated Reading Intervention as these were the only supplemental early literacy interventions available to first grade ELLs in bilingual education in the participating school districts.

The present study focuses on student outcomes; thus, it does not directly deal with issues related to program implementation. *Descubriendo la Lectura* follows strict guidelines regarding program implementation that include record keeping, lesson format, duration of the intervention, and teacher training. Since Accelerated Reading Instruction does not follow the same guidelines, consistent data was not available. Therefore, the present study does not include an analysis of program evaluation. The Accelerated Reading Instruction programs implemented in the districts selected for this study adhere to the requirements established by TEA. The requirements include criteria regarding the use of highly qualified teachers, criteria for student identification and placement, grouping of up to four students, 30-45 minutes of daily supplemental instruction, and

direct systematic instruction in the areas of phonemic awareness, alphabetic principle, decoding, fluency, vocabulary development, and reading comprehension (TEA, 2001).

The Spanish literacy assessments used in this study were selected by the districts from a list approved by TEA. The *Instrumento de Observación de los Logros de la Lecto-Escritura Inicial* was used by all three districts for all *Descubriendo la Lectura* students, the *Inventario de Lectura en Español de Tejas* or *Tejas LEE* was used by two districts for all students, and *Evaluación del Desarrollo de la Lectura* was used by one district for all students, to assess early literacy development at several points in time before, during, and after the interventions. Correlations between the instruments were not established; therefore, comparisons were made between students that took the same assessment.

Summary

Supplemental intervention is critical for the success of learners who are having difficulty with early literacy. Further research studies that focus on this type of response are necessary in order to provide a solid foundation for the academic achievement of all students. This study examined and compared the outcomes of supplemental early literacy intervention models for first grade ELLs in bilingual education through the study of the *Descubriendo la Lectura* and the Accelerated Reading Instruction models.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Early literacy development is critical to academic success. Students who have difficulty learning how to read and write in the primary grades are likely to continue having difficulty in school (Stanovich, 1986; Stanovich & West, 1979; Juel, 1998). Supplemental early literacy intervention programs in Spanish are designed to support students in bilingual education settings who are encountering difficulty with reading and writing (Escamilla, Loera, Ruíz & Rodríguez, 1998). The purpose of this quantitative study was to examine and compare the outcomes of supplemental early literacy intervention models for first grade ELLs in bilingual education through the study of the *Descubriendo la Lectura* and the Accelerated Reading Instruction models.

This literature review will present a rationale for early literacy intervention and specifically for early literacy intervention in Spanish. Issues dealing with the development and research of bilingual education and its value for early literacy instruction will be addressed. In addition, an overview of the theoretical framework of two models of literacy intervention will be presented.

Early Literacy Intervention

First grade literacy achievement is an important factor in subsequent school attainment; students who do not learn to read in the first grade are also likely to suffer future literacy problems and school failure (Lennon & Slesinski, 1999; Stanovich, 1986; Ross, Smith, Casey, & Slavin, 1995). One in six children experience reading difficulties in first through third grade (Good, Simmons, & Smith, 1998). Children who have difficulty learning how to read and write in the first grade are likely to continue having difficulty in school. Juel (1988) reported that 88 percent of children who had difficulty reading in first grade would continue to have difficulty reading at the end of fourth grade. Torgesen states in his article *Preventing Reading Failure and its devastating downward spiral* (*American Educator*, Fall 2004, p. 28): “Children who are poor readers at the end of first grade almost never acquire average-level reading skills by the end of elementary school”.

Literacy is the foundation of all other areas of academic learning (Snow, Burns & Griffin, 1999). Students are expected to use reading to learn; when they struggle with literacy, students are very likely to struggle in all the other academic areas (Slavin et al., 1998). According to Shaywitz et al. (1999), children who were struggling readers at the end of third grade continued to struggle in high school. The authors attribute this to ineffective reading strategic processing, lack of practice, limited reading opportunities, and frustration. Young children who are not making adequate progress in reading continue to fall further behind over time while their successful peers continue to improve,

widening the academic achievement gap. In addition, struggling readers have difficulty with reading fluency and vocabulary development, which in turn hinders comprehension (Stanovich, 1986; Torgesen, 1998). Inadequate early literacy skills exacerbate reading frustration and the subsequent avoidance of reading results in a cycle of reading failures and negative academic outcomes (Felton & Pepper, 1995).

Students who fall behind tend to stay behind and the academic achievement gap grows wider every year (Zemelman, Daniels, & Hyde, 1993, 2005). The majority of high school dropouts can be predicted by early literacy problems (Walker, 1995). While long-term traditional remedial programs have very limited results (Spiegel, 1995) early intervention helps students avoid more difficulties in schooling and in other aspects of life (Dworkin, 1993).

There are two major early literacy intervention theoretical frameworks. They follow corresponding theoretical perspectives regarding the reasons for difficulty with beginning reading. These two major theoretical frameworks can be summarized as a complex view and a simple view of reading.

Complex View

Several researchers address multiple and complex constructive interactions that may present struggling readers with difficulty (Clay, 2001; Poplin, 1988; Goodman, 1994; Smith, 1994; Ferreiro, 2003). Clay (1991) defines reading as “a message-getting, problem-solving activity that increases in power and flexibility the more it is practiced” (p.6). In Clay’s view of reading, students must perform a myriad of complex strategic

cognitive activities that link several sources of information. The sources of information include visual information such as the symbols provided by the printer's code and invisible information such as the syntax of the language and their knowledge of the world. Students use these sources of information to perform problem-solving cognitive activities that allow them to interact with continuous text in a self-extending system that improves every time that it is used. Reading is an interactive activity centered on meaningful messages where students bring their language, their knowledge of the code, and their experiences to the story.

Poplin (1988) defines learning as the construction of meaning or the process by which the learner constructs new meanings. There is an interaction between the new learning and a concept already known. Reading thus is a complex interaction of old and new meanings. Children continuously recall old knowledge and experiences that interact with the new learning in a spiral of complex cognitive structures. Recalled experiences are transformed into new meanings as comparisons are made, questions are posed and solutions discovered. Reading comprehension is personal and constructed within the context of the reader's individual experiences and processes (Poplin 1988; Dechant, 1991).

These understandings point to a complex theory of literacy learning (Clay, 2001). A complex view of reading supposes many cognitive processes, strategies, and skills, interacting in order to decipher a meaningful story. Meaning is at the heart of the activity and comprehension is ongoing and indispensable to decoding. Under this view

comprehension is not a product of reading but an integral part of the process. That is, reading cannot take place without comprehension. Students comprehend at the same time they are reading and their comprehension allows for effective and efficient processing in their interaction with print.

Rossenblatt (1985) discussed the interactions that take place during reading between the reader and the author. She explains that there are two stances that can be taken in reading. The first stance is what she calls an efferent stance. This stance is necessary when the material being read deals with academic knowledge such as a science book. The aesthetic stance is the stance used when poetry or prose is read. Both stances involve an interaction with the reader where the reader brings her/his knowledge into play and these experiences contribute to the meaning that is extracted from the text. This is also a complex view of reading that places comprehension at the forefront of reading and as part of the reading process, not as a result of reading.

Under a complex view of reading, students who struggle with early literacy would need an early literacy intervention that takes these intricacies into account. Early literacy intervention lessons would revolve around continuous and meaningful text and not a sequenced set of rules, isolated words, skills, or items of knowledge that are presented out of context. The intervention would also entail massive amounts of reading of familiar and new stories at instructional levels of difficulty that would allow students to utilize the strategies that they already know at the same time that a little challenge is presented so that they can extend strategies that are only partially known and develop new ones. In

order to achieve this, instruction focuses on supporting students' strengths and needs. Skills and items of knowledge are taught explicitly within the context of a meaningful story. Teaching decisions are made after careful analysis of patterns of student responses rather than based on a predetermined scope and sequence. Clear examples of specific skills and items of knowledge are chosen and taught in generative and productive ways (Clay, 2001). This intervention would require "a highly trained teacher, working one-to-one with a child and making contingent decisions based on careful observations of what the child can do" (Mceneaney, Lose & Schuartz, 2006, page 122). A complex theoretical framework such as the one described above forms the theoretical underpinnings of *Descubriendo la Lectura* and the *Instrumento de Observación*.

Simple View

A simple view of reading (Gough & Tunmer, 1986; Hoover & Gough, 1990) proposes that learning to read involves two basic processes: learning to decipher the print and listening comprehension. This notion of reading supposes that when children are skilled readers they gain automaticity with graphophonemic decoding processes and word recognition and can perform both of these processes in ways that allow their attention to focus on the meaning of the text while the mechanics of reading operate automatically. In this simple view of reading, decoding skills and language comprehension skills are equally important to reading comprehension. In other words, if a child is good at decoding words and the child understands spoken language without difficulty, then it

would be safe to assume that the child would not have difficulty extracting the meaning from the text.

Proponents of a simple view of reading affirm that when children are struggling with reading it is because they have deficits in language comprehension, and/or in decoding skills and are described as having 'garden variety' reading difficulties (Stanovich, 1986; Ehri, 1979).

Stanovich (1986, 1991) posits that the primary enabler and most potent predictor of reading success is phonological awareness and that deficits in phonological processing can make it extremely difficult for children to learn graphophonemic correspondences, resulting in difficulties in reading. Ehri's position (1979) is that reading acquisition and phonological awareness are reciprocal, phonological awareness facilitates reading and reading facilitates phonological awareness, hence problems with phonological awareness would be a predictor of problems with reading.

Under a simple view of reading, early literacy intervention would consist of direct, systematic, and sequenced instruction. The program would include emphasis on skills such as alphabetic principle, phonemic awareness, word recognition, fluency, automaticity and decoding. The Accelerated Reading Instruction model and the *Tejas LEE* were developed using a simple view of reading theoretical framework.

Early Literacy Intervention in Texas

A Nation at Risk, the 1983 report of the National Commission on Excellence in Education, stated dissatisfaction with the educational system in the United States due to

poor performance of students in national and international assessments. This report resulted in an emphasis on educational achievement and test scores. During the early 1990s the nation focused on reading achievement, particularly on the results of measures of reading ability. The National Reading Panel was created by the National Institute of Child and Human Development to identify successful reading programs and to propose recommendations for improving reading instruction in schools. Responding to the nation's continued interest in reading and academic achievement, President Clinton's Reading Excellence Act in 1998 made reading attainment a national priority.

In 2002, President George W. Bush signed the No Child Left Behind Act (NCLB), which highlights educational accountability, high academic standards, and standards based annual assessments. This law utilizes statewide accountability measures to assess student performance and provide instructional intervention strategies to ensure that no group is left behind as a result of poverty, ethnicity, disability, and limited English proficiency. According to NCLB, schools that report low achievement scores and fail to make adequate yearly progress will over time be accountable for corrective action that may result in the loss of federal funding (United States Department of Education, 2002). While the intent of NCLB is to insure the education of all children in the nation regardless of income ability and background, the reality is that it actually forces schools to leave plenty of children behind (Dolc, 2004; Books, 2003).

The TAKS is the high-stakes standardized test used in Texas to comply with NCLB mandates. It was designed to assess students' understandings of the Texas

Essential Knowledge and Skills (TEKS), which form the foundation of the state-mandated curriculum. It is administered to students in grades three to eleven. Students must pass the reading portion of the test in order to be promoted to the next grade level. TAKS reports show that LEP students continue to score at lower levels than their peers with each passing school year, consequently the gap between LEP students and non-LEP students grows wider every year.

Table 1 shows the percentage of LEP students and all students in the state of Texas who passed the TAKS reading test during the year 2005 for grades three through nine and the percentage of LEP and all Texas students who passed the English language arts TAKS in the tenth and eleventh grades. Instead of a reading test, an English language arts test, which includes both reading and writing, is given at the tenth and eleventh grade levels. In third grade, 79 percent of LEP students passed the test and 89 percent of all Texas students passed, creating an achievement gap of ten percent. The achievement gap increased to 38 percent by fifth grade and to 54 percent by ninth grade, the grade level when a large number of LEP students give up and leave the system.

Table 1. *TAKS Reading Scores 2005*

2005 Reading TAKS Scores		3rd	4 th	5th	6th	7th	8th	9th	10th *ELA	11th *ELA
	State	89%	80%	75%	86%	81%	84%	83%	68%	88%
	LEP	79%	58%	37%	51%	33%	30%	30%	20%	39%
	Gap	10%	22%	38%	35%	48%	54%	53%	48%	49%

* ELA (English Language Arts)

Adapted from: <http://www.tea.state.tx.us/perfreport/acis/2005/state.html>

Table 2 shows the percentage of LEP students and all students in the state of Texas who passed the TAKS reading test during the year 2006 for grades three through nine and the percentage of LEP and all Texas students who passed the English language arts TAKS in the tenth and eleventh grades. Instead of a reading test an English language arts test is given at the tenth and eleventh grade levels. The gap remains abysmal even though the percentages of tenth and eleventh graders are somewhat misleading because as indicated earlier, a large number of LEP students leave school between ninth and tenth grade.

Table 2. *TAKS Reading Scores 2006*

2006 Reading TAKS Scores		3rd	4th	5th	6th	7th	8th	9th	10th	11th
									*ELA	*ELA
	State	90%	83%	81%	92%	80%	84%	88%	86%	89%
	LEP	82%	63%	48%	64%	29%	32%	41%	32%	36%
	Gap	8%	20%	33%	28%	51%	52%	47%	54%	53%

* ELA (English Language Arts)

Adapted from: <http://www.tea.state.tx.us/perfreport/acis/2006/state.html>

The Reading First portion of the NCLB addresses the importance of early reading and highlights the value of research in the design and implementation of literacy programs and interventions (The NCLB Act of 2001, 2002). The closing of achievement gaps in literacy and academic achievement between struggling students and their peers is at the heart of this reform. The reform activists behind NCLB have stressed that the instruction of reading should be based on scientific research (U.S. Department of Education, 2001).

The Texas Education Agency (TEA) created the Texas Reading First Initiative in response to Texas Legislature mandates. According to TEA, this initiative consists of a plan based on six important components of scientific research-based instruction, which includes elements dealing with leadership development, diagnostic assessment, balanced programs, intermediate intervention, progress monitoring, and student performance analysis (TEA, 1996). The Texas Reading First initiative requires schools to evaluate student performance, using an approved criterion-referenced test to identify early reading deficiencies in the five key areas of reading development identified by the National Reading Panel: phonics and phonemic awareness, vocabulary development, reading fluency, and reading comprehension (Center for Academic and Reading Skills, 1999).

School districts have been requested to consider the components mentioned above in order to design comprehensive early literacy education plans that include a cohesive vision. In addition, district goals must be clearly stated and combined with ongoing professional development that will allow administrators and teachers to understand and implement the curriculum (TEA, 1996). Under the Texas Reading First Initiative, districts are requested to tie programs and activities to student achievement.

This state initiative mandates the implementation of several levels or tiers of intervention that serve as safety networks for struggling readers. These interventions allow students the opportunity to benefit from intensive and focused supplemental instruction. A three-tier approach of intervention (Caplan 1961, 1962; Pianta, 1990) is recommended by many experts in the field of early literacy to reduce reading problems

and it constitutes an important component of a comprehensive literacy plan. In bilingual education classrooms, these additional layers of support are provided in the native language.

Caplan conceptualized a three-tiered framework of prevention (1961, 1962). Pianta affirms that three levels of preventive services reduce the need for remedial programs (Pianta, 1990). When these levels of preventive services are implemented, the capacity of remedial programs, according to the researcher, would then increase to meet the needs of students with severe problems. He describes three forms of preventive service delivery: primary prevention, secondary prevention, and tertiary intervention or remediation.

Primary prevention programs are designed to reduce the rate of occurrence of a particular problem. This level of intervention is designed for a group of individuals who have not been identified as having a particular problem. A primary level of intervention works by strengthening the well-being of the individuals in the population as a form of immunization against the causes of subsequent problems. Primary interventions are made available to the entire population and are targeted specifically toward groups and individuals. An example of primary intervention is good quality classroom instruction.

Secondary prevention programs serve the groups who are very likely to suffer the problem at hand. These programs respond to an early identification process and provide

an intervention aimed at eliminating or reducing the risk for the problem. An example of secondary prevention is an academic tutorial program for students who are beginning to fail.

Tertiary prevention usually consists of remediation after a negative outcome has been attained, that is after the child has failed. Documentation of the failure is necessary to receive the services of this type of program. It is the most common form of formal intervention in school and traditionally includes programs such as grade-level retention, special education services, and long-term remedial interventions (Pianta, 1990).

The Texas Reading First three-tier reading model is founded on this concept and consists of three levels of intervention for students at risk of reading difficulty (Texas Reading Initiative, 2003). These interventions are intended to work in conjunction with excellent classroom instruction. Classroom instruction is the cornerstone and first tier of the plan. Ongoing monitoring and periodic assessment in the Texas Reading First model provide early identification for students who are struggling with early reading. This model supposes that regardless of the quality of classroom instruction, a number of students will need a secondary tier of support, which involves additional small group strategic instruction; and that another number of students will require a third and more intensive level of intervention. This third level of intervention is to take place before students experience negative outcomes. In the Texas Reading First implementation, this additional level of support is provided through intensive supplemental daily instruction for an extended period of time (Texas Reading Initiative, 2003). Students who are

participating in a bilingual education program of instruction in the state of Texas are assessed and receive intervention in their native language.

Bilingual Education

Bilingual education consists of a dual language pedagogy that allows for the use of the native language in addition to the mainstream language as a means for instruction. Students receive instruction in their mother tongue in the content areas and in literacy while they learn English as a second language. The goals of bilingual education are two-fold: English language proficiency at the highest academic level possible and academic achievement in all content areas (Willig, 1985; Collier & Thomas, 1992). Bilingual education has been a part of the educational system of the United States for centuries (Crawford, 2004).

Bilingual education began in the 1800s when parochial and small community schools were an effort on the part of immigrants to provide tutoring or support for mainstream school learning and to allow their children the opportunity to remain in contact with their language and culture. Bilingual instruction took place in German and French before it took place in Spanish. Moreover, dual language programs of education have existed in the United States in languages such as Russian, Norwegian, Italian, Polish, Czech, and Cherokee. Stemming from the civil rights movements of the 1960s Congress passed the Bilingual Education Act in 1968, which provided funding to school districts that implemented bilingual education programs (Crawford, 1995; Ovando, 2003). Growth and strengthened implementation of bilingual education programs resulted

from the 1974 Supreme Court ruling that schools must provide an equitable education to language minority students (*Lau vs. Nichols*, Supreme Court Ruling, 1974).

Teachers in bilingual classrooms guide their students toward mastery of both languages. They use techniques that facilitate the acquisition of English while providing opportunities for the students to continue strengthening their native language knowledge and skills while learning academic content at their age appropriate grade level. The use of the native language in an enrichment model of bilingual education allows students to perform at the highest academic levels (Ovando, Combs & Collier, 2006; Thomas & Collier, 2001). This in turn, prevents academic achievement gaps that surface if students do not understand the language of instruction (Cummins, 1995).

Bilingual education programs in the United States serve Hispanic ELLs for the most part, although there are bilingual education programs in Chinese and Vietnamese. Recently the popularity of Spanish/English and Chinese/English dual language programs has appealed to parents of monolingual English speakers because these programs offer all children the opportunity to become bilingual (Baker, 2006; Soltero, 2004). Quality bilingual education programs provide language learners the opportunity that every child should have, the opportunity to learn (Krashen & McField, 2005). The instruction of literacy from an additive and enriching perspective, one that values the strength of linguistic and cultural diversity is paramount. This view not only allows for a more effective transfer of literacy skills but also for greater academic gains and ultimately

builds the bridges to the academic and overall success of bilingual students (Krashen, 1996).

Bilingual Education in Texas

There are approximately 5.5 million non-English speaking students in U.S. public schools and 80% of these students are Spanish-speaking students. Texas is one of 19 states that have experienced a 200% English language learner population growth over the past 10 years (U.S. Census, 2000). According to the 2003-2004, student profile for the state of Texas 1,894,108 students or 44% of the total student population is Hispanic and there are 660,707 ELLs currently enrolled in school. Of this group of students, 337,560 elementary school students are enrolled in Bilingual Education programs (TEA, PEIMS 2004).

The current educational reform, NCLB, calls for scientific research to support the curriculum and instruction of all students and pays particular attention to the needs of ELLs. There is a concerted federal and state effort to close the achievement gaps of minority groups, particularly in the areas of reading and writing. Bilingual education is an effective way to close these gaps because it addresses the linguistic, literacy, and academic needs of ELLs from an additive point of view, placing value on their linguistic and cultural strengths (Freeman, 1993).

Bilingual Literacy

The primary goal of most transitional bilingual education programs in the United States is to enable students to become fully proficient in English and to attain mastery of

the academic concepts and skills necessary to be able to exit into a mainstream instructional program. The transfer of knowledge from one language to another has been explored by several researchers (Cummins, 2004). This theory is one of the fundamental concepts that supports bilingual education. In literacy, children interact with text to construct meaning by manipulating graphophonic, syntactic, semantic, and pragmatic information. It makes sense that children who are learning how to read are able to access these cuing systems in a language they are able to speak fluently (Goodman, 1979).

Language acquisition is developmental (Krashen, 1996). Children construct their understandings about the world through the use of language. The connection between language, cognition and code awareness is critical to the learning of reading and writing. Information accessed through the first language makes the second language more comprehensible, thus facilitating second language acquisition. Second language learners acquire language when they are able to understand it. Language instruction should be founded on providing learners with messages they understand (Krashen, 2000; Pérez & Torres-Guzmán, 1992).

Knowledge about the native language shares a common foundation with knowledge about the second language. In other words, linguistic systems have a common underlying proficiency. This theory is referred to as the dual iceberg model of the bilingual brain. The surface features are different but the deep knowledge about language is the same. This common cross-lingual base supports both languages (Cummins, 1983).

It is important to understand that there are various levels of language competency. Basic Interpersonal Communication Skills (BICS) is the language needed to interact in social contexts on a daily basis. This level of proficiency can be attained after a couple of years of social exposure to a second language. Cognitive Academic Language Proficiency (CALP) is the academic language that is needed to succeed in an academic setting; this is the language of school and learning. This level of proficiency is related to literacy, developed through schooling, and is estimated to be attained after five to seven years. The most efficient way to attain this level of competency is by strengthening the native language, not by replacing it (Cummins, 1993).

A child with a strong literacy foundation in the native language will be able to transfer many skills to the second language (Clay, 1993). For example, phonological awareness is a skill that has been identified as transferable to a second language in several quantitative studies. Cisero and Royer suggest a developmental order and discuss the value of phonological awareness in literacy learning and its possible implication in transition into English reading (Cisero & Royer, 1995). Durgunuglu and Öney also identify several linguistic and metalinguistic areas such as knowledge of semantics, phonology, syntax, pragmatics, and phonological awareness as factors that transfer across languages to facilitate literacy and biliteracy (Durgunuglu & Öney, 1999, 2000). Reading and writing are more efficiently taught in the native language, as these are skills that can be transferred (Kroll, 1990).

If knowledge is effectively and strongly developed in the native language, then it can be efficiently transferred to a second language (Saville-Troike, 1977). Literacy and academic proficiency in the first language foster conceptual and academic growth. This, in turn, facilitates literacy acquisition and academic achievement in the second language (Cummins, 1985, Cummins, 1987; Thomas & Collier, 1997, 2001). Considering these factors, it is evident that a solid foundation in the native language is important, and when appropriate, an early literacy intervention that matches the language of instruction may be necessary.

Early Literacy Intervention in Spanish

Students who benefit from an accelerated early literacy intervention are able to return to the average reading group of their peers (Felton & Wood, 1992; Francis, Shaywitz, Stuebing, & Fletcher, 1996). However, once this critical period has passed, reading difficulties persist and it is unlikely that students will catch up with their peers. (Juel, 1998; Shaywitz et al., 1999; Torgesen & Burgess, 1998). Therefore, in order to prevent academic failure, focus must be placed on early assessment, identification, and intervention for children who might be at risk of reading failure (Mathes, Denton, Fletcher, Anthony, Francis, & Schatschneider, 2005). This effort calls for programs that are sensitive to the needs and development of children in kindergarten and first grade, who are in the very early stages of beginning reading (Clay, 1998; Scarborough, 1998; Torgesen, 2002).

The review of a limited number of early literacy intervention programs available in Spanish in the U.S. indicates that this is a viable intervention for second language learners (Cheung & Slavin, 2005). These programs assist Hispanic limited English proficient students in closing educational gaps efficiently and rapidly (Thompson, 2003). Longitudinal examinations of the long-term effects of these programs further indicate that literacy gains are sustained in subsequent years (Escamilla, Loera, Ruiz, & Rodríguez, 1998). While a number of programs have been designed to provide intensive and accelerated supplemental instruction to struggling readers, only a few have been devised to meet the needs of first graders receiving early literacy instruction in Spanish in the U.S. (Cheung & Slavin, 2005).

Summary

Success in reading and writing in the primary grades is paramount for ELLs in bilingual education programs. Supplemental early literacy interventions delivered in the native language provide struggling students the opportunity to master critical literacy skills. This study examined and compared the outcomes of supplemental early literacy intervention models for first grade ELLs in bilingual education through the study of the *Descubriendo la Lectura* and the Accelerated Reading Instruction models.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this quantitative study was to examine and compare the outcomes of supplemental early literacy intervention models for first grade ELLs in bilingual education through the study of the *Descubriendo la Lectura* and the Accelerated Reading Instruction models. The research questions guiding this study are as follows:

1. What are the outcomes of first grade supplemental early literacy intervention delivered in Spanish on the literacy development of bilingual students?
2. What are the differences and/or similarities in the outcomes of two interventions: Accelerated Reading Instruction and *Descubriendo la Lectura*?

Overview of the Study

In order to answer the research questions, a post-hoc approach was used to assess the pre-post outcomes of Spanish-speaking first graders who received supplemental early literacy intervention using the *Descubriendo la Lectura* and the Accelerated Reading Instruction models. Three independent school districts in the state of Texas were included in the study. The participants completed their first grade interventions during the 2005-2006 school years. The sample included in the study represented students who received Accelerated Reading Instruction, students who received *Descubriendo la Lectura*, and

students who received both Accelerated Reading Instruction and *Descubriendo la Lectura*. In addition, a comparison/control group consisting of a random sample of their peers who did not participate in supplemental intervention was included. Data consisted of student scores from the *Instrumento de Observación de la Lecto-Escritura Inicial*, the *Tejas LEE*, and the *Instrumento para la Evaluación del Desarrollo de la Lectura* for the beginning and end of the school year. The study utilized descriptive and inferential statistical analyses to explore pre- and post- treatment outcomes within and between groups.

Study Design

Initial Design

Initially, the study design included two groups. The groups consisted of a group of students who participated only in Accelerated Reading Instruction and a group of students who participated only in *Descubriendo la Lectura*. This design was based on preliminary information that all students had participated in only one intervention. The distinctive characteristics of program implementation in the school districts added an additional level of richness and complexity to the study.

Design Adaptation

A number of students (80) received both interventions as part of a comprehensive early literacy intervention plan. This group of 80 students participated in Accelerated Reading Instruction and then received *Descubriendo la Lectura* as a third tier of intervention. Therefore, they were included as a third group (receiving both

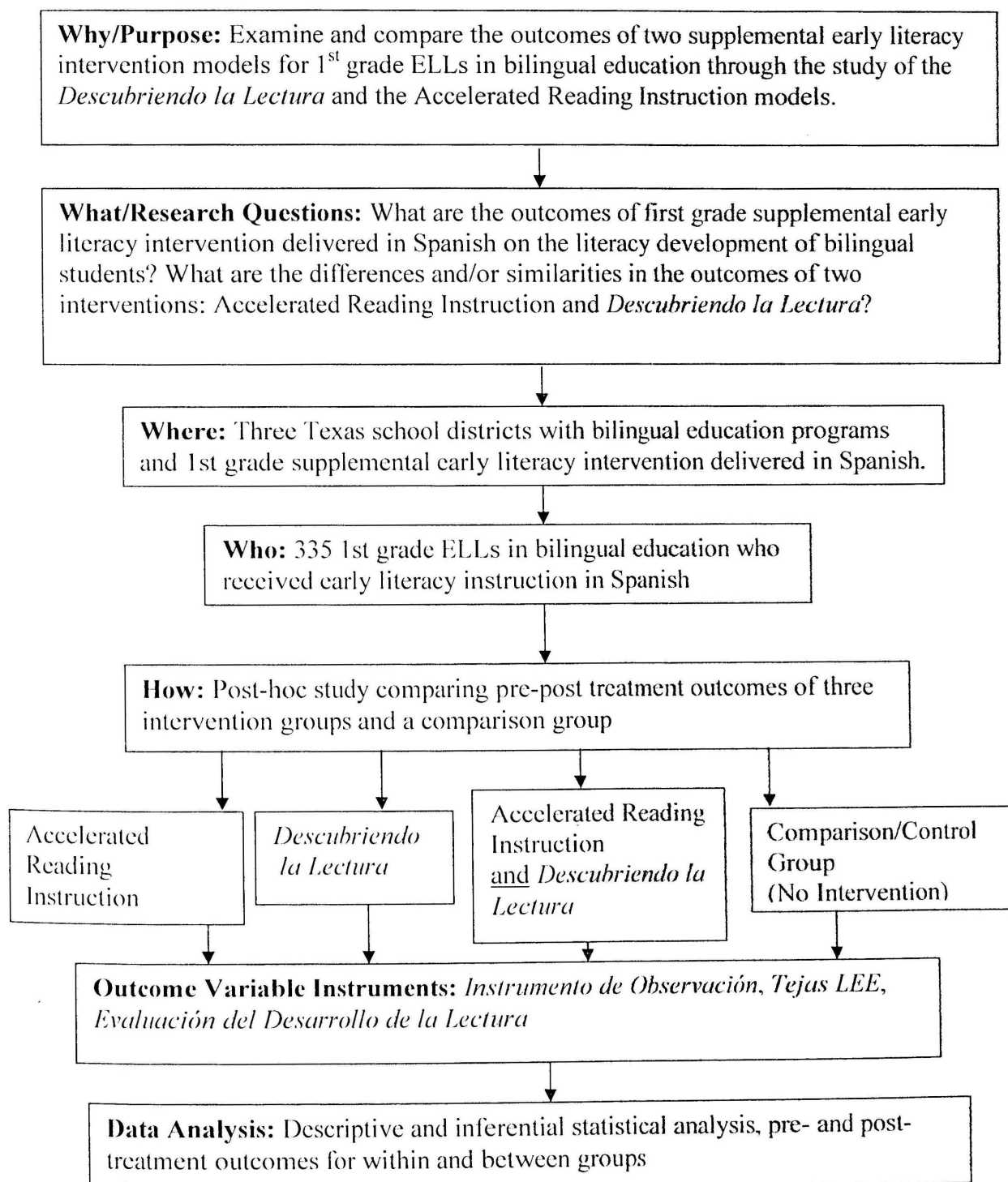
interventions) in order to adequately represent the contextual factors of program implementation across districts.

Two districts provided information not only for the students requested, but also for all bilingual first grade students in the district. Therefore, a comparison/control group of students who did not participate in either intervention was included in the design. This component has added to the significance and strengthened the interpretations of the findings in this study.

Final Design

The final study design included four groups. The four groups consisted of two groups that received one intervention only, Accelerated Reading Instruction or *Descubriendo la Lectura*, a group that received both interventions Accelerated Reading Instruction and *Descubriendo la Lectura*, as well as a comparison/control group. The comparison/control group was formed by a random sample of their peers who did not receive a supplemental intervention. Figure 1 shows an overview of the final design of the study.

Figure 1. Final Design of the Study



Timeline of the Study

This study was conducted in four phases. Phase I consisted of the review of the literature and the development of the study. Phase II dealt with access and data collection across three districts. Phase III centered on the analysis and interpretation of pre- and post- intervention data and Phase IV dealt with discussion, conclusions and recommendations.

Table 3. *Timeline of the Study*

Phase	Focus	Activities	Review & Analysis
<i>Phase I</i> 09/01/05 to 07/17/06	Developed study design Developed criteria for district, school and student selection	Studied existing district policies Gathered preliminary information Reviewed the two interventions addressed: DLL and ARI	Reviewed literature for pertinent information and previous research related to the topic Continued to expand and extend literature review
<i>Phase II</i> 07/17/06 to 12/31/06	Gained access to districts and secured contacts	Procured consent and approval for study Identified instruments used by the districts Studied the instruments and considered validity and reliability Collected existing data Verified data entry	Developed charts to collect data Coded data Developed database Conducted preliminary data analyses
<i>Phase III</i> 12/31/06 to 5/31/07	Data Analysis	Transferred data to SPSS	Conducted descriptive and inferential analyses Data interpretation and generalizations
<i>Phase IV</i> 5/31/07 to 6/29/07	Reported Findings	Summarized results	Discussed results, conclusions and recommendations

District Selection Criterion

The districts selected for the study offered bilingual education programs that delivered early literacy instruction in Spanish and had two types of first grade Spanish supplemental early literacy intervention in place: *Descubriendo la Lectura* and Accelerated Reading Instruction. In addition, the districts utilized Spanish instruments to assess early literacy skills in the bilingual first grade. The scores of these instruments were used to explore and compare the outcomes of the students.

Several districts provided preliminary information. Final district selection depended on the availability of the data and district authorization once access for the study was procured. See Appendix A and Appendix B for a research request letter to the districts and a preliminary information form.

Gaining Access to the Districts

All districts in Texas with *Descubriendo la Lectura* program implementation were approached personally through program administrators about the possibility of participating on this study. The researcher followed up with an e-mail requesting preliminary information about the availability of both intervention models and procuring general information regarding district and school descriptions, bilingual education program models used, and contact information for administrators. Once the availability of the programs and the nature of the bilingual models were compared and found similar in terms of bilingual education program implementation in first grade, district administrators were contacted and a formal request for permission to conduct research

was mailed. Appendix A and Appendix B provide a copy of the letter mailed and the form used to gather preliminary data.

When permission was granted, a district lead contact was given a letter outlining the details of the study and the timeline. This contact collected archival information for each school in the district where the *Descubriendo la Lectura* and Accelerated Reading Instruction for bilingual first grade students took place in 2005-2006 and for all students who participated on the interventions using EXCEL spreadsheets that were prepared for this purpose. The forms used codes and numbers rather than names to protect the confidentiality of the participants. See Appendix C, Appendix D, and Appendix E for the data collection charts.

Population and Sample

Three independent school districts in the state of Texas provided a setting for this study. The participant sample consisted of 26 schools and 335 first grade students in bilingual education programs. The students included in the study were Hispanic ELLs who received beginning reading instruction in Spanish. These students completed their first grade during the 2005-2006 school year.

District Description

The researcher reviewed the district information available in TEA reports in order to understand the population included in the study. The information provided rich detail including accountability ratings from the state examinations as well as demographic data. This was the most recent published information available (TEA,

PEIMS, 2006). The three districts that participated in the study were rated Academically Acceptable by TEA for the 2004 and 2005 school year.

The TEA demographic reports describe the student population as follows: African-American, Hispanic, White, and Other (Appendix F). In terms of ethnic distribution, District One had the largest percentage of White students and the smallest percentage of Hispanic and African American students. District One's percentage of Asian/Pacific Islander or Native American (Other) was almost the same as its African American student population. District Two had the highest percentage of Hispanic students. The ethnic distribution of Districts Two and Three was similar for White and African American population.

District One is located in North Texas. It is served by the Region 10 Education Service Center. It was the largest district included in the study. This district had 57 schools and a total student population of 43,815 students. According to their website, District One has grown rapidly and enjoys many new communities, businesses, and shopping centers. Up to ten institutions of higher education surround this district. Two major airports, museums, zoos, gardens, and other cultural venues and amenities are easily accessible to this community. District One reported 3,653 students in first grade in 2004 with a class size average of 19. There were 3,762 students enrolled in Bilingual/ESL education programs. This represents eight percent of the total student population in the district.

District Two is located in the southern plains of west Texas. It is served by the Region 18 Education Service Center. It was the smallest district in the study and included 35 schools with a population of 20,831 students. This district reports new bonds to renovate their elementary and secondary school campuses. In addition, two new elementary magnet schools focusing in the areas of math, science, and technology recently opened. It operates 26 elementary schools, two early education centers, and nine high schools ranging from junior to senior high as well as one alternative school. There are several colleges as well as a prestigious state university located in the area. The median educational level of the citizens of this area ranks among the highest in the country. Students have access to several museums, and cultural opportunities are coordinated and promoted in the community. District Two had 1,550 students in first grade in 2004 with a class size average of 17. There were 1,509 students enrolled in Bilingual/ESL education programs or seven percent of the total student population in the district.

District Three is located in the Texas panhandle. It is served by the Region 16 Education Service Center. It had 50 schools and a student population of 29,348 children. The district operates four high schools, nine middle schools, 36 elementary schools, a specialty high school, and an alternative school. There has been very limited population growth and commercial development, and the area, in general, has suffered economic deterioration throughout the years. The meatpacking and petroleum industries are major employers for this community. The school district is also an important employer.

Residents of this area enjoy a number of natural attractions as well as historic museums, cultural museums and a performing arts center. There are approximately five universities and colleges in the area. District Three had 2,297 in first grade in 2004 with a class size average of 15. There were 2,525 students enrolled in Bilingual/ESL education programs or eight percent of the total student population in the district.

Student Description

According to TEA, economically disadvantaged students are those who are reported as eligible for free or reduced-price meals under the National School Lunch and Child Nutrition Program. Fifty-six percent of the student population in District Three was considered economically disadvantaged. District Two shows 47 percent on this category, while District One included only 12 percent. Appendix G shows a more detailed comparison between the three districts.

The students that were included in the study represented three intervention groups and a comparison/control group. See Table 4 for detailed information. A total of 86 students from all districts participated only in the Accelerated Reading Instruction intervention. A total of 86 students from all districts participated only in the *Descubriendo la Lectura* intervention. A total of 80 students from all districts received both interventions. The comparison/control group consisted of 83 students who did not receive an intervention.

The intervention groups consisted of 108 girls and 144 boys. Records received from two districts indicated that 144 students were participating in free or reduced lunch

programs and 34 students were not. The random sample comparison/control group consisted of 37 girls and 46 boys. Records also indicate that 50 students from the comparison/control group were participating in free or reduced lunch programs and 34 were not. The groups included in the study will be described in detail below.

Intervention Variable Groups

This study included 252 Spanish-speaking first grade ELLs in bilingual education programs who received supplemental early literacy instruction in 26 schools in three Texas independent school districts and 83 students who did not receive an intervention. In District One, 51 students participated only in the Accelerated Reading Instruction intervention and 27 students participated only in the *Descubriendo la Lectura* intervention. A total of six students in District One received both interventions. In District Two, one student participated only in Accelerated Reading Instruction and 31 students participated only in *Descubriendo la Lectura*. A total of 39 students in District Two received both interventions. In District Three, 34 students participated only in Accelerated Reading Instruction and 28 students participated only in *Descubriendo la Lectura*. A total of 35 students in District Three received both interventions.

The comparison/control group consisted of a random sample totaling 83 students, 44 students from District One and 39 students from district Two. District Three did not provide data for students that did not participate in an intervention; consequently, students from that district were not included in the random sample comparison/control group.

Table 4 provides a description of the intervention groups including the three groups described above and a comparison/control group consisting of a random sample of students who did not receive a treatment because their test scores and teacher assessment did not show a need for intervention.

Table 4. *Intervention Variable Groups*

District	Intervention Group 1 Accelerated Reading Instruction (ARI)	Intervention Group 2 <i>Descubriendo la Lectura</i> (DLL)	Intervention Group 3 Both (ARI and DLL)	No Intervention Group 4 (Comparison/ Control Group)	Total
District 1	51	27	6	44	128
District 2	1	31	39	39	110
District 3	34	28	35	0	97
Total	86	86	80	83	335

Number of Students by Intervention

The 335 students that were included in the study represented three intervention groups and a comparison/control group. A total of 86 students from all districts participated only in the Accelerated Reading Instruction intervention. A total of 86 students from all districts participated only in the *Descubriendo la Lectura* intervention.

A total of 80 students from all districts received both interventions. The comparison/control group consisted of 83 students who did not receive an intervention. Table 5 shows the number of students and the percentages of the total number represented in the study by each intervention group. Participation by district will be further described below.

Table 5. *Number and Distribution of Students by Intervention*

Intervention	Students	Distribution %
Accelerated Reading Instruction (ARI)	86	25.7
<i>Descubriendo la Lectura</i> (DLL)	86	25.7
Both Interventions (ARI and DLL)	80	23.9
No Intervention (Comparison/Control Group)	83	24.8
Total	335	100

District Variable Groups

A total of three districts, 26 schools, and 335 first grade students in Bilingual Education, including 128 students from District One, 110 students from District Two, and 97 students from District Three were included in the study. Table 6 shows the number of students and the distribution of the total number represented in the study by each district. The next section will describe the comparison/control group.

Table 6. *Number and Distribution of Students by District*

District	Students	Distribution %
District One	128	38.2
District Two	110	32.8
District Three	97	29
Total	335	100

Comparison/Control Variable Group

In addition to the data requested, two districts included data for all the students in bilingual first grade, including those students who did not receive an intervention because their test scores did not show a need for this additional support. These data provided a random sample group to compare end of the year outcomes for the students who participated in the Accelerated Reading Intervention and *Descubriendo la Lectura*. Eighty-three students were randomly selected for the comparison/control group using a random table of numbers. This comparison/control group consisted of 37 girls and 46 boys. They were all first grade ELLs in bilingual education programs. Fifty students from the comparison/control group were participating in free or reduced lunch programs and 34 were not. This group of students also received beginning reading instruction in Spanish but did not receive early literacy intervention.

Data for all the groups described above was collected using the Spanish early literacy assessments selected by the districts included in the study. These instruments

provided pre- and post- outcome data for the groups of students who participated in the interventions. School districts also provided assessment data for the comparison/control group. The outcome variable instruments will be described in the next section.

Outcome Variable Instruments

The outcome variable instruments were selected by the districts from a list approved by TEA and are further discussed below. The *Instrumento de Observación de los Logros de la Lecto-Escritura Inicial*, was used by all three districts for all *Descubriendo la Lectura* students, the *Inventario de Lectura en Español de Tejas* or *Tejas LEE* was used by two districts, and the *Evaluación del Desarrollo de la Lectura* was used by one district to assess the students' early literacy development at several points in time before, during, and after the interventions.

Instrumento de Observación de los Logros de la Lecto-Escritura Inicial (*Instrumento De Observación*). The *Instrumento de Observación* (Escamilla, Andrade, Basurto, & Ruíz, 1996) is a Spanish reconstruction of An Observation Survey of Early Literacy Achievement (Clay, 1993, 2005). It is a conceptual recreation that takes into account the needs of children who operate in two languages and who acquire literacy skills in both languages. While it is delivered in Spanish, this instrument provides teachers the opportunity to observe and analyze literacy behaviors in both English and Spanish.

The instrument consists of six tasks that provide opportunities for the teacher to assess the following skills: reading behavior in oral reading, decoding, concepts about

print, upper and lower case letter identification, knowledge of high frequency words in reading, writing vocabulary, as well as phonemic and phonological knowledge through dictation. Raw scores on the Instrumento are converted to stanines. Norms and reliability measures have been established for each task for bilingual students in the United States and updated in 2005. The measures of the 'Instrumento' have also been correlated to the measures of the Iowa Test of Basic Skills or ITBS (Gomez-Bellengé et al. 2005). The tasks included in the *Instrumento de Observación* are further described below.

Identificación de Letras (Letter Identification)

This section of the *Instrumento de Observación* measures the number of upper case and lower case letters that a child can identify by letter name, sound or a word that starts with that letter. The highest score that can be achieved in this section is 57 points.

Prueba de Palabras (Word Test)

This section of the *Instrumento de Observación* measures the number of words a child can read correctly from a high frequency word list in Spanish. The highest score that can be achieved in this section is 20 points.

Conceptos del Texto Impreso (Concepts About Print)

This section of the *Instrumento de Observación* examines a child's understanding of concepts about how print encodes information. The highest score that can be achieved in this section is 24 points.

Escritura de Vocabulario (Writing Vocabulary)

This *Instrumento de Observación* task measures the number of words a child can write in a ten-minute period. Students receive one point for each word correctly written. There is no ceiling score on this task.

Dictado (Hearing and Recording Sounds in Words)

This section of the *Instrumento de Observación* measures the number of phonemes a child can hear and record when dictated a sentence. The highest score that can be achieved in this section is 37 points.

Registro de Lectura (Text Reading Level)

This task utilizes a running record of reading behavior to measure the highest level of continuous-text the child can read with a minimum of 90 percent accuracy. There is no ceiling score on this task. Each number represents a text level of increased difficulty.

While each task of the *Instrumento de Observación* has been described in terms of scores, the most important aspect of this assessment are the anecdotal notes taken by the teacher. The careful analysis of these notes will inform the teacher and shape the child's program.

El Inventario de Lectura en Español de Tejas: Spanish version of the Texas Primary Reading Inventory (Tejas LEE). The *Tejas LEE* is an individually administered assessment designed for use with students grades Kindergarten through third grade receiving initial reading instruction in Spanish. It measures reading and comprehension

skills in Spanish. The *Tejas LEE* is a criterion-referenced test. It is based on five cognitive elements: reading comprehension, language comprehension, phoneme awareness, concepts about print, and phonological awareness. In first grade, the *Tejas LEE* is administered at the beginning, middle, and end of the school year (TEA, 2005; Wren, 2006). The sections comprising the *Tejas LEE* are further described below.

Section 1 *Conocimiento de los Sonidos* (Letter-Sound Identification)

According to the *Tejas LEE* Administration Guide, (2003-2004, TEA and the University of Texas System), this section measures students' understanding of sound-symbol relationships or the ability to identify the sounds associated with the letters of the alphabet.

The possible scores for this section are *Desarrollado* (Developed) which includes scores of 12 or more and *No Desarrollado* (Not Developed) which includes scores of 11 or less.

Sections 2 through 8 *Conciencia Fonológica* (Syllable and Phoneme Identification and Manipulation)

According to the *Tejas LEE* Administration Guide, sections 2 through 8 *Conciencia Fonológica* (Syllable and Phoneme Identification and Manipulation) measure the student's ability to identify and manipulate individual syllables and sounds spoken in words. Possible scores in each sub-test on this section are indicated below.

Section 2- Unión y Segmentación de las Sílabas (Blending and Segmenting Syllables)

The possible scores for this section are *Desarrollado* (Developed), which includes scores of 5 or more and *No Desarrollado* (Not Developed), which includes scores of 4 or less.

Section 3- Omisión de la Sílabla Inicial (First Syllable Omission)

The possible scores for this section are *Desarrollado* (Developed), which includes scores of 5 or more and *No Desarrollado* (Not Developed), which includes scores of 4 or less.

Section 4- Omisión de la Sílabla Final (Last Syllable Omission)

The possible scores for this section are *Desarrollado* (Developed), which includes scores of 3 or more and *No Desarrollado* (Not Developed), which includes scores of 2 or less.

Section 5- Identificación del Sonido Inicial (First Sound Identification)

The possible scores for this section are *Desarrollado* (Developed), which includes scores of 3 or more and *No Desarrollado* (Not Developed), which includes scores of 2 or less.

Section 6- Unión y Segmentación de los Sonidos (Blending and Segmenting Phonemes)

The possible scores for this section are *Desarrollado* (Developed), which includes scores of 5 or more and *No Desarrollado* (Not Developed), which includes scores of 4 or less.

Section 7- *Omisión del Sonido Inicial* (Initial Phoneme Omission)

The possible scores for this section are *Desarrollado* (Developed), which includes scores of 3 or more and *No Desarrollado* (Not Developed), which includes scores of 2 or less.

Section 8- *Omisión del Sonido Final* (Final Phoneme Omission)

The possible scores for this section are *Desarrollado* (Developed), which includes scores of 3 or more and *No Desarrollado* (Not Developed), which includes scores of 2 or less.

Exactitud de Lectura (Reading Accuracy)

According to the *Tejas LEE* Administration Guide, this subtest measures the ability to accurately read written text. The text selection (Stories 1-5, in gradient of difficulty, 1 is designated the easiest and five the most difficult) is based on the number of words read correctly on Section 11. *Reconocimiento de Palabras* (Word Test). The results of this section are used to choose the story the child will read, but the scores are not recorded. If a child reads nine or fewer words correctly, the child does not read a story, but instead he or she will listen to a story and respond to oral comprehension questions. If a child reads 10-13 words correctly, the child will read Story 1. If a child reads 14-17 words correctly, the child will read Story 2. If a child reads 18-21 words correctly, the child will read Story 3. If a child reads 22-24 words correctly, the child will read Story 4. If a child reads 25 or more words correctly, the child will read Story 5.

If a child cannot read the recommended story, based on a predetermined number of incorrect responses, then the previous story level will be administered (for example Story 4 instead of 5). The number of the story is recorded 1 being the lowest and 5 the highest (2003-2004, TEA and the University of Texas System).

Proporción de la Fluidez de la Lectura (Reading Fluency)

According to the *Tejas LEE* Administration Guide, this score measures the ability to accurately read text fluidly and automatically. The formula used to score this section is: (Number of words read correctly) ÷ (Number of seconds in which the passage was read) X 60 = Fluency Rate.

Comprensión de Lectura (Reading Comprehension)

According to the *Tejas LEE* Administration Guide, this subtest measures the ability to understand the context of the text that the student has read. The possible scores for this section are *Desarrollado* (Developed) which includes scores of 5 or more and *No Desarrollado* (Not Developed) which includes scores of 4 or less.

Spanish Developmental Reading Assessment, 'Evaluación del Desarrollo de la Lectura' (EDL). This assessment is used to monitor Spanish-speaking K-3 students' reading performance and allows for periodic assessments for accountability. This is a criterion-referenced test; normative data are not presented. All the materials have been field-tested in Spanish for reliability and validity with bilingual educators across the United States. Reading comprehension and oral reading accuracy are used in assessing decoding skills. This assessment measures a reading level using a running record of

reading behavior (Clay, 1993). Rubrics are provided for evaluating comprehension through story retelling and specific comprehension questions. Cognitive elements included are reading comprehension and decoding (Wren, 2006).

Data for first grade students in the state of Texas, including students in Accelerated Reading Instruction and *Descubriendo la Lectura* was collected at the beginning, in January, and at the end of the school year by the school districts using one or a combination of the instruments mentioned above. For students in the *Descubriendo la Lectura* program *Instrumento de Observación*, additional data were collected at the beginning of the intervention, upon exit, and at the end of the school year. This post-hoc study utilized the districts' archives to access the data needed.

Data Collection

Archival data were collected for Spanish speaking, first graders, who received beginning reading instruction in Spanish and who participated in *Descubriendo la Lectura* and/or the Accelerated Reading Instruction intervention during the 2005-2006 school year. Data collection included student demographic information as well as scores from the *Instrumento de Observación de la Lecto-Escritura Inicial*, the *Tejas LEE*, and the *Instrumento para la Evaluación del Desarrollo de la Lectura* for the beginning and end of the school year. See Appendixes C, D, and E for the data collection charts.

When permission was granted to collect data at the district and at the school level, the lead contacts in each district were provided detailed information explaining the data collection procedures in meetings, letters and e-mails. Lead contacts were also provided

with electronic EXCEL charts for each campus as well as a chart for the district. The data requested included, gender, birth date, free or reduced lunch information, English and Spanish level of proficiency at the beginning of first grade, and participation in early literacy intervention programs, as well as test scores for the beginning, middle and end of the year. Once the data for all the campuses was collected, the lead contacts transferred the data to a district chart and made the information available to the researcher.

It took approximately four months to collect the data for the three districts. The data received at the end of this process did not include all the information requested, mostly, mid-year test scores and language proficiency information was missing. Strategies to procure the missing data included communication via phone calls, e-mails, and personal visits. The data collected at the end of this effort was carefully checked and verified for accuracy.

The next step involved coding the data and developing a new EXCEL structure. The database integrated the various measures as well as the students' demographic information. This was done in preparation for the statistical analysis of each outcome measure using the Statistical Package for Social Sciences, version 15.0 (SPSS 15).

Data Analysis

The EXCEL file used to aggregate all the data collected was transformed to an SPSS database file and statistical analyses were conducted. The first level of data analysis consisted of descriptive statistics which were reported in a tabular format as prescribed

by the American Psychological Association (APA) Manual (5th Edition). This level of analysis included frequencies, percentages, means and standard deviations.

In order to explore the outcomes of first grade supplemental early literacy intervention delivered in Spanish on the literacy development of bilingual students, paired t-tests were conducted for each task on every assessment, comparing means of the various groups on the subtests of the *Tejas LEE*, the *Instrumento de Observación*, and the *Evaluación del Desarrollo de la Lectura*. In addition, gains of the intervention groups and the comparison/control group in the assessments tasks were determined by subtracting beginning of the year means from the end of the year means. A gains rate was determined for the *Tejas LEE* tasks by dividing the intervention group gains by the comparison/control group gains. The results of these procedures were then further organized and analyzed utilizing tables and graphs in the form of bar charts.

In order to explore the differences and/or similarities in the outcomes of two interventions: Accelerated Reading Instruction and *Descubriendo la Lectura*, descriptive and inferential analyses to explore pre- and post- treatment outcomes within and between groups were performed using analysis of variance and post-hoc tests. One-way analyses of variance were used to determine if there were significant differences between intervention groups or between districts. Tukey post-hoc analyses were also conducted to study multiple comparisons between the group of students who received only Accelerated Reading Instruction or only *Descubriendo la Lectura*, and the group of students who

received both models: Accelerated Reading Instruction and *Descubriendo la Lectura* and to explore multiple comparisons between districts.

Background of the Researcher

During the course of this study, the researcher was employed as a bilingual education teacher training program administrator and instructor. Before beginning doctoral studies, she received a Master in Education with a focus on Bilingual/ESL instruction from Texas Woman's University where she also received training in the Reading Recovery/*Descubriendo la Lectura*, program. The researcher is a professional educator with 15 years of classroom and administrative experience and is certified in the state of Texas to teach the elementary grades of Pre-Kindergarten through sixth. The training and expertise in the areas of focus of this study contributed to the understanding of the complex issues in the early literacy development of Spanish-speaking students.

Summary

This quantitative study examined and compared the outcomes of supplemental early literacy intervention models for first grade ELLs in bilingual education through the study of the *Descubriendo la Lectura* and the Accelerated Reading Instruction models. Archival data was collected for Spanish-speaking first graders, who received beginning reading instruction in Spanish and who participated in *Descubriendo la Lectura* and/or the Accelerated Reading Instruction intervention during the 2005-2006 school year.

The study utilized descriptive and inferential analyses to explore pre- and post-treatment outcomes within and between groups. This chapter provided specific detail regarding the methodological design of the study. The results of the study will be discussed in the next chapter.

CHAPTER IV

RESULTS

Introduction

This study examined and compared the outcomes of supplemental early literacy intervention models for first grade ELLs in bilingual education through the study of the *Descubriendo la Lectura* and the Accelerated Reading Instruction models. This was accomplished by utilizing archival data to assess the outcomes of Spanish-speaking, first graders who received beginning reading instruction in Spanish, and who participated in supplemental interventions during the 2005-2006 school year. The analysis consisted of descriptive and inferential techniques exploring pre- and post- treatment outcomes within and between groups. Descriptive statistics have been thoroughly described in the population and sample section of the methodology chapter in tables 4, 5, and 6. Results regarding group and student outcomes will be summarized in this chapter.

Results of Statistical Analysis

This section begins by presenting the results of the descriptive and inferential statistical techniques exploring pre- and post- treatment outcomes within and between groups. Analyses included one-way analyses of variance, Tukey post-hoc tests, and paired t-tests, as well as graphs and tables. Results of the groups are presented first,

followed by an analysis of student outcomes. A comparison of the students' gains will conclude this section.

Group Results

A one-way analysis of variance (ANOVA) was conducted to determine if there were significant differences between intervention groups. Results showed that there were overall significant differences between intervention groups (See Table 7).

Table 7. *One-way ANOVA Analysis Between Intervention Groups*

ANOVA	Sum of Squares	df	Mean Square	F Value	Sig.
Between Groups	34.341	3	11.447	20.177	.000*

* The mean difference is significant at the .0001 level.

A One-way analysis of variance (ANOVA) was conducted to determine if there were significant differences between districts. Results showed that there were overall significant differences between districts (See Table 8).

Table 8. *One-way ANOVA Analysis Between Districts*

ANOVA	Sum of Squares	df	Mean Square	F Value	Sig.
Between Groups	60.365	2	30.182	27.741	.000*

* The mean difference is significant at the .0001 level.

A Tukey post-hoc analysis was conducted to study multiple comparisons between the group of students who received only Accelerated Reading Instruction or only *Descubriendo la Lectura* and the group of students who received both models: Accelerated Reading Instruction and *Descubriendo la Lectura*. The post-hoc analysis showed significant differences in students who received both interventions when compared with students who received Accelerated Reading Instruction or *Descubriendo la Lectura* only. When both interventions were used, the effect was larger (See Table 9).

Table 9. *Multiple Comparisons Between Intervention Models*

Intervention Model		Mean Difference	Std. Error	Sig.
1 (ARI)	2 (DLL)	-.209	.115	.265
	3 (Both)	-.560*	.117	.000
2	1	.209	.115	.265
	3	-.351*	.117	.015
3	1	.560*	.117	.000
	2	.351*	.117	.015

*The mean difference is significant at the .05 level.

A Tukey post-hoc analysis was conducted to explore multiple comparisons between districts. The post-hoc analysis showed significant differences between districts one and two, and between districts two and three (See Table 10).

Table 10. *Multiple Comparisons Between Districts*

District		Mean Difference	Std. Error	Sig.
1	2	-.719*	.136	.000
3		.326	.140	.055
2	1	.719*	.136	.000
3		1.044*	.145	.000
3	1	-.326	.140	.055
2		1.044*	.145	.000

The mean difference is significant at the .05 level.

Further analyses comparing means of the various groups on the subtests of the *Tejas LEE*, the *Instrumento de Observación*, and the *Evaluación del Desarrollo de la Lectura* were conducted using paired t-tests. Results showed that all students who participated in supplemental reading intervention made significant gains. Additional analysis comparing the pre-and post- test scores, indicated that the students who were identified as struggling students in need of intervention at the beginning of the school year, made comparable progress to that of the students who did not need an intervention, or the average group of their peers, as measured by their gains on the end of the year assessments.

The next section of this chapter will provide more detail about student outcomes.

Student Results

A series of paired t-tests showed that students who participated in Accelerated Reading Instruction, *Descubriendo la Lectura*, and in both interventions (Accelerated Reading Instruction and *Descubriendo la Lectura*) made significant progress in all subtests in the *Tejas LEE*.

Paired t-tests also showed that students who participated in the *Descubriendo la Lectura* and in both interventions (*Descubriendo la Lectura* and Accelerated Reading Instruction) made significant gains in all tasks of the 'Instrumento de Observación'. Students who participated only in Accelerated Reading Instruction and random sample students did not take this assessment, as this is a test given only to *Descubriendo la Lectura* students in all three districts.

A paired t-test comparison of the beginning and end of year *Evaluación del Desarrollo de la Lectura* text reading level assessment also showed that students who participated in the *Descubriendo la Lectura* and in Accelerated Reading Instruction interventions made considerable gains in the reading of continuous text.

The *Tejas LEE* was administered to all students in two of the districts participating in the study, District One and District Two. District Three administered *Evaluación del Desarrollo de la Lectura* to all students. In addition, *Instrumento de Observación* was administered in all districts to all *Descubriendo la Lectura* students. Student outcomes will be reported by assessment. Graphs for each outcome reported in this section are available in Figures 2 to 19 shown in Appendix G.

Student Outcomes on the Tejas LEE

Section 1 *Conocimiento de los Sonidos* (Letter-Sound Identification)

Intervention students made considerable gains estimated at 39.4 percent.

Furthermore, the achievement gap between the students who received the interventions and the random sample students decreased from 31.4 percent to 5.2 percent at the end of the year (See Figure 3, Appendix G).

Section 2- *Unión y Segmentación de las Sílabas* (Blending and Segmenting Syllables)

Intervention students made considerable gains estimated at 44 percent. In addition, the achievement gap between the students who received the interventions and the random sample students decreased from 21.4 percent to 3 percent at the end of the year (See Figure 4, Appendix G).

Section 3- *Omisión de la Sílabla Inicial* (First Syllable Omission)

Intervention students made considerable gains estimated at 65.1 percent. In addition, the achievement gap between the students who received the interventions and the random sample students decreased from 36.5 percent to 18 percent at the end of the year (See Figure 5, Appendix G).

Section 4- *Omisión de la Sílabla Final* (Last Syllable Omission)

Intervention students made considerable gains estimated at 61 percent. Moreover, the achievement gap between the students who received the interventions and the random sample students decreased from 68.3 percent to 32.9 percent at the end of the year (See Figure 6, Appendix G).

Section 5- *Identificación del Sonido Inicial* (First Sound Identification)

Intervention students made considerable gains estimated at 26.9 percent. Furthermore, the achievement gap between the students who received the interventions and the random sample students decreased from 14.4 percent to 3.2 percent at the end of the year (See Figure 7, Appendix G).

Section 6- *Unión y Segmentación de los Sonidos* (Blending and Segmenting Phonemes)

Intervention students made considerable gains estimated at 53.8 percent. In addition, the achievement gap between the students who received the interventions and the random sample students decreased from 27.1 percent to 7.1 percent at the end of the year (See Figure 8, Appendix G).

Section 7- *Omisión del Sonido Inicial* (Initial Phoneme Omission)

Intervention students made considerable gains estimated at 61.5 percent. In addition, the achievement gap between the students who received the interventions and the random sample students decreased from 32.6 percent to 11.6 percent at the end of the year (See Figure 9, Appendix G).

Section 8- *Omisión del Sonido Final* (Final Phoneme Omission)

Intervention students made considerable gains estimated at 70.8 percent. Moreover, the achievement gap between the students who received the interventions and the random sample students decreased from 34.7 percent to 11.7 percent at the end of the year (See Figure 10, Appendix G).

Exactitud de Lectura (Reading Accuracy)

Intervention students increased their reading level from a level of 1 at the beginning of the year to a level of 4.33 at the end of the year. Random sample students increased their reading level from a level 3.7 to a level 4.6 (See Figure 11, Appendix G).

Proporción de la Fluidez de la Lectura (Reading Fluency)

Intervention students read 15.13 words per minute at the beginning of the year and 41.08 words per minute at the end of the year. Random sample students read 27.7 words at the beginning of the school year and 62.5 words at the end of the school year (See Figure 12, Appendix G).

Comprensión de Lectura (Reading Comprehension)

Outcomes show considerable gains estimated at 49.9 percent considering beginning of the year and end of the year percentage of intervention and random sample children who received a score of *Desarrollado* (Developed) on this subtest. Furthermore, the achievement gap between the students who received the interventions and the random sample students decreased from 17.1 percent to 16.4 percent at the end of the year. While this decrease is not as dramatic as the decrease in other subtests, the gains of the intervention group (49.9 percent) are quite comparable to the gains of the random sample group, which were 49.2 percent (See Figure 13, Appendix G).

Table 11 shows a comparison of the percentage of students that scored *Desarrollado* (Developed) or *No Desarrollado* (Not developed) on the *Tejas LEE* subtests that report these categories. This comparison includes beginning and end of the

school year scores for each group. Since scores on the *Exactitud de Lectura* (Reading Accuracy) and *Proporción de la Fluidez de la Lectura* (Reading Fluency) sections were not reported using the *Desarrollado* (Developed) or *No Desarrollado* (Not developed) categories, those sections were not included on Table 11. Those results were reported on the previous section. Results for *Exactitud de Lectura* (Reading Accuracy) and *Proporción de la Fluidez de la Lectura* (Reading Fluency) are also presented on the graphs included on the Appendixes (See Figures 11 and 12).

Table 11. *Tejas LEE Outcomes*

<i>Tejas LEE</i>	Intervention ARI		Intervention DLL		Intervention Both ARI and DLL		No Intervention Comparison/ Control Group	
	Number- 86		Number- 86		Number- 80		Number- 83	
<i>Task</i>	Beg. %	End %	Beg. %	End %	Beg. %	End %	Beg. %	End %
<i>Conocimiento de Sonidos y Letras</i>	36.4	87.8	45.8	86	64.1	89.2	79.5	92.7
<i>Unión y Segmentación de Sílabas</i>	34.1	83.7	50	94.2	61.5	100	69.5	95.1
<i>Omisión Sílabas Inicial</i>	2.3	69.4	2.6	62.0	6.5	75.6	40	86.7
<i>Omisión Sílabas Final</i>	0	57.1	4.2	64.4	0	65.9	31.3	83.5
<i>Identificación Sonido Inicial</i>	70.5	93.9	60.4	96	76.9	97.2	83.1	98.8
<i>Unión y Segmentación de los Sonidos</i>	2.3	69.4	19	68.6	42.9	85	46.9	80.7
<i>Omisión del Sonido Inicial</i>	0	65.3	12.5	66	12	75	39.5	80
<i>Omisión del Sonido Final</i>	0	63.3	0	69	0	82.1	34.7	82.5
<i>Comprensión</i>	11.4	63.3	4.2	54.9	25.6	72.1	30.1	79.3

The previous section presented student outcomes on the *Tejas LEE*. This section will present student outcomes on the *Instrumento de Observación*.

Student Outcomes on the Instrumento de Observación

Identificación de Letras (Letter Identification)

Outcomes on this subtest show that students who received the *Descubriendo la Lectura* and both interventions gained 13.6 points at the end of the year (See Figure 14, Appendix G).

Prueba de Palabras (Word Test)

Outcomes on this subtest show that students who received the *Descubriendo la Lectura* and both interventions gained 11.85 points at the end of the year (See Figure 15, Appendix G).

Conceptos del Texto Impreso (Concepts About Print)

Outcomes on this subtest show that students who received the *Descubriendo la Lectura* and both interventions gained 7.3 points at the end of the year (See Figure 16, Appendix G).

Escritura de Vocabulario (Writing Vocabulary)

Outcomes on this subtest show that students who received the *Descubriendo la Lectura* and both interventions gained 30.1 points at the end of the year (See Figure 17, Appendix G).

Dictado (Hearing and Recording Sounds in Words)

Outcomes on this subtest show that students who received the *Descubriendo la Lectura* and both interventions gained 17.4 points at the end of the year (See Figure 18, Appendix G).

Registro de Lectura (Text Reading Level)

Students who received the *Descubriendo la Lectura* and both interventions show a gain of 15.4 text-reading levels at the end of the year (See Figure 19, Appendix G).

Table 12 shows beginning of the year and end of the year mean scores on the *Instrumento de Observación* tasks at the beginning and end of the school year for students who received the *Descubriendo la Lectura* intervention and students who received both Accelerated Reading Instruction and *Descubriendo la Lectura*.

Table 12. *Instrumento de Observación Outcomes*

<i>Instrumento de Observación</i>	Intervention DLL		Intervention Both ARI and DLL	
	Number- 86		Number- 80	
Task	Beg. Mean	End Mean	Beg. Mean	End Mean
<i>Registro de Lectura</i>	1.63	16.97	1.22	16.64
<i>Identificación de Letras</i>	44.45	57.64	42.03	56.36
<i>Prueba de Palabras</i>	6.41	18.30	5.99	17.97
<i>Conceptos del Texto Impreso</i>	10.12	17.97	9.96	16.57
<i>Escritura de Vocabulario</i>	9.55	42.19	10.46	38.00
<i>Dictado</i>	18.44	36.78	19.72	36.43

Student outcomes on the *Instrumento de Observación* were presented in the previous section. The section below will include student outcomes on the *Evaluación del Desarrollo de la Lectura*.

Student Outcomes on the Evaluación del Desarrollo de la Lectura

This assessment measures a reading level using a running record of reading behavior. Students who received intervention show a gain of 13.1 levels at the end of the year (See Figure 20, Appendix G).

Table 13 shows beginning of the year and end of the year mean scores on the *Evaluación del Desarrollo de la Lectura* text reading level at the beginning and end of the school year for students who received *Descubriendo la Lectura* and students who received both Accelerated Reading Instruction and *Descubriendo la Lectura*.

Table 13. *Evaluación del Desarrollo de la Lectura Outcomes*

<i>Evaluación Desarrollo Lectura</i>	Intervention ARI		Intervention Both ARI and DLL	
	Number- 86		Number- 80	
Text Reading Level	Beg. <i>Mean</i>	End <i>Mean</i>	Beg. <i>Mean</i>	End <i>Mean</i>
<i>Nivel de Lectura</i>	1.42	15.87	.92	11.14

The next section will describe the gains of all the students who participated in supplemental early literacy intervention. It will compare the gains of all the intervention groups with the gains of the comparison/control group. In addition, a gains rate will be explained.

Gains

The dramatic gains rate experienced by the intervention groups who participated in supplemental early literacy intervention is evident when the gains of the intervention groups and the gains of the random sample group in the *Tejas LEE* tasks are compared.

This gains rate represents the gains of all the intervention students who scored *Desarrollado* (Developed) at the end of the year, when compared with the random sample students who scored *Desarrollado* (Developed) at the end of the year.

For example, for the *Conocimiento de Sonidos y Letras* (Letter-Sound Identification) section, at the end of the year, 39.4 percent more intervention students scored *Desarrollado* (Developed) than at the beginning of the year; and only 13.2 percent more comparison/control group students scored *Desarrollado* (Developed) than at the beginning of the year. In other words, for each one percent increase in the comparison/control group, there was an increase of 2.98 percent in the intervention group, so there was a gains rate of 1: 2.98 percent on that section at the end of the year. Table 14 shows gains rates on the *Tejas LEE* tasks.

Table 14. *Tejas LEE Gains Rate Based on Percentages*

<i>Tejas LEE Task</i>	Intervention Group Gain (IGG %)	Comparison/ Control Group Gain (CGG %)	Gains Rate (GR) $IGG \% \div CGG \% = GR \%$
	Number- 252	Number- 83	
<i>Conocimiento de Sonidos y Letras</i>	39.4	13.2	1 : 2.98
<i>Unión y Segmentación de Sílabas</i>	44	25.6	1 : 1.72
<i>Omisión Sílabas Inicial</i>	65.1	46.7	1 : 1.39
<i>Omisión Sílabas Final</i>	61	25.6	1 : 2.39
<i>Identificación Sonido Inicial</i>	26.9	15.7	1 : 1.71
<i>Unión y Segmentación de los Sonidos</i>	53.8	33.8	1 : 1.59
<i>Omisión del Sonido Inicial</i>	61.5	40.5	1 : 1.52
<i>Omisión del Sonido Final</i>	70.8	47.8	1 : 1.48
<i>Comprensión</i>	49.9	49.2	1 : 1.01

Summary

ANOVA analyses showed that there were overall significant differences between intervention groups and between districts. Further analyses comparing means of the various groups on the subtests of the *Tejas LEE*, the *Instrumento de Observación*, and the *Evaluación del Desarrollo de la Lectura* were conducted using paired t-tests. Results showed that students who participated in supplemental reading intervention made significant gains. Additional analyses indicate that the students who were identified as struggling students in need of intervention at the beginning of the school year made comparable or better progress than the students who did not need an intervention (or the average group of their peers) as measured by end of the year assessments.

CHAPTER V

DISCUSSION

Introduction

The purpose of this quantitative study was to examine the outcomes of supplemental early literacy intervention for first grade ELLs in bilingual education through the study of the *Descubriendo la Lectura* and the Accelerated Reading Instruction models. A post-hoc research approach was used to assess the pre-post outcomes of these two interventions. Archival data were collected on three outcome variable instruments for three intervention groups and a random sample group of students who did not receive an intervention. Data analysis included descriptive and inferential statistical techniques. Results were reported in the previous chapter and findings are discussed below. Suggestions for future research will be addressed followed by implications for educational policy and concluding remarks.

Findings

The first research question addressed in this study was stated as follows: What are the outcomes of first grade supplemental early literacy intervention delivered in Spanish on the literacy development of bilingual students? Findings of the study showed that students who participated in supplemental early literacy intervention delivered in Spanish had positive outcomes in their literacy development. First grade English language

learners in bilingual education who received a second or third tier of early literacy instructional support in their native language made significant gains.

The second research question of this study was stated as follows: What are the differences and/or similarities in the outcomes of two interventions: Accelerated Reading Instruction (ARI) and *Descubriendo la Lectura* (DLL)? Four groups of first grade ELLs were studied: two groups that received one intervention (ARI or DLL), one group that received two interventions (ARI and DLL) and a comparison/control group of their peers who did not receive supplemental instruction. Findings of the study showed that there were no significant differences between students who participated in Accelerated Reading Instruction only and students who participated in *Descubriendo la Lectura* only. The outcomes of both interventions were positive. There were, however, significant differences between students who participated in both models and students who participated in only one.

Discussion of the Findings

Students who were identified as struggling students in need of intervention at the beginning of the school year and who received early literacy intervention made equal or higher gains on the *Tejas LEE* than students who did not need an intervention. Students who participated in *Descubriendo la Lectura* only and in both *Descubriendo la Lectura* and Accelerated Reading Intervention also show positive outcomes on the *Instrumento de Observación* and in the *Evaluación del Desarrollo de la Lectura*. Findings of this study provide additional research-based evidence regarding the value of supplemental early

literacy intervention for Spanish-speaking students in bilingual education programs. Until this study, our knowledge of early literacy intervention for Spanish speakers was based primarily on one level of intervention. The unique design of this study provided the opportunity to study the outcomes of two levels of intervention. These understandings add to the current literature regarding the value of early literacy intervention for Spanish-speakers in bilingual education programs (Alanís & Tinajero, 2003; Cheung & Slavin, 2005; Escamilla et al., 1998).

Findings of this study also indicate that there were no significant differences on the *Tejas LEE* between students who participated in *Descubriendo la Lectura* and students who participated in Accelerated Reading Instruction. Students who participated in each early literacy intervention model made tremendous gains on the *Tejas LEE*. All the students who received an intervention showed positive outcomes in their reading progress.

There were significant differences, however, for students who participated in both models. Students benefited from receiving two supplemental tiers or layers of intervention. When both interventions (DLL and ARI) were used, the effect was stronger. Students who participated in both interventions had more success on the *Tejas LEE* at the end of the year than students who participated only in one.

Students who participated in both models received Accelerated Reading Instruction first. Their teachers recommended an additional tier of supplemental intervention in the form of *Descubriendo la Lectura* based on their observations that they

continued to be in danger of failing first grade reading. This group of students was part of a second or third round of *Descubriendo la Lectura* students. This additional intervention was possible because the *Descubriendo la Lectura* intervention model lasted an average of 12-20 weeks and teachers worked with several rounds of students.

A comparison of student outcomes on the *Tejas LEE* shows that more students who participated in both Accelerated Reading Instruction and *Descubriendo la Lectura* scored *Desarrollado* (Developed) on the various subtests at the beginning of the year, prior to receiving any intervention (See Table 11). Even though beginning *Tejas LEE* scores were much higher for the group of students who participated in both models, this group of students needed the most support. They needed two additional levels of intensive early literacy intervention in addition to their classroom reading instruction.

Students who participated in both Accelerated Reading Instruction and *Descubriendo la Lectura* had higher success on the *Tejas LEE* tasks at the beginning of the year than the students who participated only in *Descubriendo la Lectura* or only in Accelerated Reading Instruction. More students in this group scored ‘Developed’ in the letter/sound identification task and in the phonological and phonemic awareness tasks. They also scored higher in the reading comprehension task. It is important to take into consideration that if a child read fewer than nine words correctly, the child did not read a story but instead listened to a story and responded to oral comprehension questions.

Phonological and phonemic awareness tasks occurred in the absence of print. Students were asked by the *Tejas LEE* assessment administrator to identify and

manipulate individual syllables and sounds in spoken words. Some students do well in oral phonemic and phonological awareness activities but struggle performing the complex problem solving and strategic endeavors that reading and writing continuous text requires. Reading requires processing several kinds of information simultaneously and performing sophisticated cognitive activities in flexible and effective ways. Student outcomes of this study provide additional support to the converging research evidence suggesting that in order to learn how to read, practice with these complex activities through authentic and meaningful literacy events is indispensable (Adams, 1990; Clay, 1998; Gibson & Levin, 1995).

The school districts included in the study provided comprehensive early literacy plans of instruction for ELLs consisting of bilingual education programs that included early literacy instruction in their native language and several layers of supplemental support. This additional support consisted of a second and a third tier of intervention for students who were experiencing difficulties (Caplan, 1961, 1962; Pianta, 1990; Texas Reading Initiative, 2003). Program administrators in the districts indicated that the students who received both interventions participated in Accelerated Reading Instruction first and then received *Descubriendo la Lectura*. Findings of the study document the value of a third tier of intervention in the design of comprehensive early literacy plans to serve ELLs in bilingual education who are struggling with beginning reading.

Students in *Descubriendo la Lectura* and Accelerated Reading Instruction made significant gains but it is important to keep in mind that these gains were accomplished in

their native language. These students will need to be monitored closely as they move into biliteracy. Spanish-speaking students who are not progressing at the same rate as their peers in early literacy would benefit from extending and strengthening their native language literacy foundation. Early transitions to all-English literacy must be carefully considered because supporting literacy growth in both languages will foster biliteracy as well as academic success (Thomas & Collier, 2001).

This study contributes to the limited body of knowledge of the student outcomes of early literacy intervention for ELLs (Neil & Kelly, 1999; Ashdown & Simic, 2000; Cheung & Slavin, 2005). The findings provide strong evidence that supplemental native language instruction in beginning reading is not only effective, but also indispensable for Spanish-speaking students who are struggling with learning how to read.

Implications for Future Research

The focus of this study was to examine the outcomes of supplemental early literacy intervention for first grade ELLs in bilingual education through the statistical analysis of the outcomes of the use of the *Descubriendo la Lectura* and the Accelerated Reading Instruction models. This study provides an excellent starting point for future investigations.

In order to extend our knowledge of early literacy intervention for ELLs in bilingual education programs, more research is needed regarding factors that contribute to successful student outcomes. Case studies or mixed methodology approaches that

investigate factors relating to teacher training, lesson planning, and student assessment would add to current theory and practice.

Further research is needed regarding the implementation of the Accelerated Reading Instruction and *Descubriendo la Lectura* models. To this date, two longitudinal research studies show that children who received the *Descubriendo la Lectura* intervention were not only brought up to the average of their peers but continued to read at grade level in second and third grade (Escamilla et al, 1998; Rodríguez, 2006).

Accelerated Reading Intervention has been widely implemented but the information regarding the effects of the program overtime is sparse. The only way to begin to fill this gap of understanding is through longitudinal research that investigates the effects of this early literacy intervention program in subsequent grades. Additional research is also needed about how districts implement early literacy intervention programs. Information regarding the level of coverage of the intervention models would provide valuable insight.

The school districts that participated in this study used early literacy assessments in Spanish. These assessments are available from a list provided by the Texas Education Agency. Studies that explore the correlation of these instruments would provide additional details regarding the early literacy development of students in bilingual education programs and would help extend the current knowledge base.

Implications for Educational Policy and Practice

Research should inform the policy that supports the academic achievement of English language learners; but this is not always the case. The socio-demographic context of this study point to an urgent need to improve policies that guide programs of instruction for linguistically diverse students. The population of Spanish-speaking ELLs in the state of Texas is ever increasing. A recent report (Murdock, 2002) from the Texas state demographer indicated that by 2040, 66.3 percent of all students enrolled in public schools would be Hispanic. Many of these students will be ELLs and the need for specialized educational programs will increase over 100 percent. In order to meet the changing educational needs of Texas students it is imperative that careful consideration is given to policies affecting the design and implementation of early literacy instructional programs for Hispanic ELLs.

Implications for School District Educational Policy

Comprehensive early literacy education plans at the school district level are essential in order to meet the needs of linguistically diverse student populations. Results of this study suggest that the following policies must be implemented:

1. Effective early literacy instruction and intervention will be provided in the students' native language.
2. Assessments of students' language and literacy development will be provided in the students' native language.

3. Professional development will be provided to EC-4 teachers in current research and related practices in bilingual education.
4. EC-4 certified teachers, who also hold bilingual certification, will deliver intervention programs.
5. Several tiers of early intervention instruction will be provided to students who struggle in learning to read and write.
6. Maintenance bilingual education and dual language education programs will be provided to students throughout their school years.
7. Districts will engage in collaborative longitudinal study of student outcomes and will utilize the ongoing results to inform instruction.

Implications for State Educational Policy

It is critical that policymakers understand and support the importance of providing beginning literacy instruction and intervention in the native language. The following comprehensive literacy state policies for ELLs are recommended.

1. State board of education policies will reflect the importance and value of early literacy instruction and intervention in students' native language.
2. Biliteracy assessments (Spanish/English) will be constructed and implemented throughout the state. These assessments will consider how the native language and the second language interact and provide students the opportunity to demonstrate literacy knowledge and development in both languages.

3. State board of education will provide funding to alleviate the shortage of EC-4 teachers certified in bilingual education.
4. Supplemental intervention programs taught in Spanish will be provided to all Spanish-speaking students who struggle in learning to read and write.
5. Maintenance bilingual education and dual language education programs will be required for all students throughout their school years.
6. State boards of education will provide funding for longitudinal studies of student outcomes and for program development.
7. Texas Education Agency will create Texas Essential Knowledge and Skills for biliteracy and will carefully monitor the implementation of maintenance bilingual education and dual language programs of instruction.

Implications for National Educational Policy

National educational policy must establish educational priorities and guidelines for the implementation of comprehensive early literacy plans for linguistically diverse student populations that include native language instruction and biliteracy goals. The following suggested policies will address the strengths and needs of ELL students.

1. Policies that require early literacy instruction and intervention in the students' native language will be created and firmly implemented.
2. Linguistic diversity will be valued through the creation and implementation of enrichment and additive programs of instruction for ELLs that address initial literacy and biliteracy goals.

3. Multilingualism and multiliteracy will be encouraged for all students. National policies will reflect this philosophy.
4. Clear guidelines requiring maintenance bilingual education and dual language programs of instruction for ELLs and effective monitoring of their implementation will be established.
5. Grants will be provided by the Department of Education for bilingual education teacher preparation and professional development programs.

Concluding Remarks

The current national educational reform (NCLB) stresses the importance of early literacy in the academic success of students. It particularly addresses first grade literacy achievement as an important factor in subsequent school attainment (National Reading Panel, 2000; Chall, Jacobs, & Waldin, 1990). Research has shown that early literacy interventions that begin in the first grade, before failure compounds over time, can provide students with the skills, knowledge and experiences needed for success in school (Slavin, 1993; Spiegel, 1995). Success in literacy can help safeguard ELLs from the problems of retention and dropout. The early literacy success of all children is an important and attainable goal for all students, but intervention must occur early, as soon as difficulties are detected.

Learning to read and write in the early elementary grades is important for monolingual English speakers and crucial for linguistically diverse students. ELLs who are struggling readers in first grade need intensive and effective intervention because they

will soon be required to transfer native language literacy knowledge to English in order to participate in mainstream instructional programs. Struggling ELLs must close existing gaps in literacy as well as in content areas and cannot afford to spend time in lengthy remedial settings (Escamilla & Clay, 1996).

The findings of this study demonstrate the value of bilingual education in helping students to make tremendous gains in early literacy. In particular, it points to the need for several tiers of support to address the needs of students who are struggling with beginning reading skills, even in their native language. The gains of the students who participated in this study are clear, but fragile. Gaps found in early literacy may not be fully closed yet. This group of students should continue to strengthen their literacy foundation in their native language in order to transfer successfully to English literacy. Otherwise, it will be impossible for them to succeed in mainstream classrooms and wider gaps will undoubtedly be created (Cummins, 1999; Krashen, 1996; Guardarrama, 1999).

The purpose of bilingual education should not be to supplant native language literacy with English literacy in a subtractive model of bilingualism but to supplement it. The goal should be to expand and extend students' linguistic competencies in order to accomplish full literacy in both languages. This can be accomplished with additive bilingual models of instruction.

Once students become biliterate, their academic and cognitive growth is extraordinary. They can close academic achievements gaps and even surpass their monolingual peers in English reading assessments (Thomas & Collier, 2002; Thomas,

Collier & Tinajero, 2005). Their progress, however, must be supported by dual language programs of instruction that consider their unique needs.

The United States has the resources needed to offer an excellent education to all students. However, the perspective of policymakers must change. Linguistic diversity must be valued as an asset and not as a problem that needs to be fixed. A world-class education has moved beyond bilingualism and biliteracy to multilingualism and multiliteracy. Students in Europe and Asia are mastering several languages before they even begin higher education. They have the advantage of a competitive edge. In order for our students and ultimately, our nation, to remain at the forefront of this global economy, this issue must be addressed. A world-class quality education should prepare all students to compete in a multilingual world.

This research study took place amidst national and state level discussions regarding the implementation and re-authorization of NCLB and Reading First as well as their impact on the academic achievement of linguistic minorities. Criticism concerning the value of bilingual education programs is an important topic that is at the center of these discussions. During the last three years, much of the researcher's time has been spent in advocacy efforts for the academic achievement of ELLs in the state of Texas in collaboration with grassroots groups and professional organizations. It is imperative that research be conducted alongside advocacy efforts in order to create lasting changes.

The efforts of researchers and advocacy groups to educate and inform policy makers about the value of bilingual education programs are critically needed. At the time

this study was taking place; several bills were being proposed in the then-current legislature sessions that proposed totally eliminating bilingual education programs and replacing them with English immersion programs for all ELL students. In addition, school board members of several Texas independent school districts proposed the elimination of bilingual education programs.

At the national level, important reports of studies funded by the federal government concerning the significance of native language instruction in early literacy development were subsequently not made available, and kept hidden from the public view until published by non-governmental entities. In addition, a federal agency investigated alleged conflicts of interest by officials and contractors in the recommendation of state-level reading programs that reduced funding for the implementation of *Descubriendo la Lectura* in many school districts and prevented thousands of English language learners in bilingual education programs from receiving early literacy intervention.

The rhetoric permeating discussions regarding the instruction of Spanish-speaking ELLs is incongruous. In some contexts, law and policy makers recognize the importance of academic success for ELLs. However, public discussions surrounding the rapid increase of ELLs reveal a high level of resentment toward this population. In order to close academic achievement gaps and promote success in education for ELLs, policy

makers, researchers and practitioners must work in unison to create comprehensive bilingual early literacy programs that view the students' diverse linguistic capabilities as treasures of unlimited potential.

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APPENDIX A
RESEARCH REQUEST LETTER

RESEARCH REQUEST LETTER

Annette Torres Elías
8117 Case Drive, Plano, Texas 75025
atorreselias@yahoo.com 469-952-8690

September 1, 2006

Dear Administrator,

I am a Ph.D. candidate in the Reading Department at Texas Woman's University engaged in a dissertation research on the development and outcomes of supplemental early literacy intervention which has been approved by the Institutional Review Board of Texas Woman's University. The purpose of this study is to examine the outcomes of supplemental early literacy intervention for first grade ELLs in bilingual education through the study of *Descubriendo la Lectura* and the Accelerated Reading Instruction models.

I recognize that X ISD is at the forefront of educational programs for ELLs. Specifically, the comprehensive early literacy plan designed and implemented by your district is to be admired. It is for this reason that I would like to include data from your district in my doctoral dissertation research study. The lead contact for X ISD would be Ms. Y.

Please find attached an overview of the study. The 2005-2006 archival data requested will be kept completely confidential, names of the students, teachers or schools will not be provided to the researcher. An electronic copy of the dissertation including a summary of results obtained in the research will be submitted for your records. Please feel free to contact me if you have any questions regarding the study. Your consideration to this request is greatly appreciated.

Best regards,

Annette Torres Elías, Ph.D. Candidate
Texas Woman's University

Enclosures:
Research Overview
IRB Approval Letter
Prospectus Approval Letter

Cc. X ISD Lead Contact

APPENDIX B
DISTRICT PRELIMINARY INFORMATION FORM

PRELIMINARY DISTRICT INFORMATION- Page 1 of 4

The study will use existing data, all data will be completely confidential (district, campus, teacher, and student). A complimentary copy of the study findings will be provided to each participating district. Contact information will not be used in the study.

District-

DLL/RR Teacher Leader Name-

Title-

Telephone Number-

Address-

E-Mail-

DLL/RR Site Coordinator Name-

Title-

Telephone Number-

Address-

E-Mail-

Accelerated Reading Instruction Coordinator Name-

Title-

Telephone Number-

Address-

E-Mail-

District Research Request Contact Information (person in charge of authorizing this research project, in some cases this may be the DLL/RR Site Coordinator or the Early Literacy Coordinator):

Name-

Title -

Telephone Number-

Address-

E-Mail-

SCHOOL & DISTRICT DESCRIPTION- Page 2 of 4

The requested information can be found on the DLL, district, campus, PEIMS and/or Title I reports.

Place an X on the closest description of your district

District Classification	Rural	Suburban	Urban	Other (Please specify)
Size (Square miles average)	50-100	100-150	151-350	
Size (Student Population)	Less than 40,000	40,000-100,000	101,000-150,000	
Percentage of Hispanic Student Population	Less than 10%	11% to 25%	26% to 50%	
Percentage of African American Student Population	Less than 10%	11% to 25%	26% to 50%	
Percentage of Asian Student Population	Less than 10%	11% to 25%	26% to 50%	
Percentage of White Student Population	Less than 10%	11% to 25%	26% to 50%	
Percentage of American Indian Student Population	Less than 10%	11% to 25%	26% to 50%	
Percentage of LEP Students	Less than 10%	11% to 25%	26% to 50%	
Percentage of Hispanic LEP Students	Less than 10%	11% to 25%	26% to 50%	

Place an X on the on the closest description of your district's bilingual education program. (It is possible to mark more than one.)- Page 3 of 4

Bilingual Education Program Implementation in the District	Newcomer (Pull-out)	Transitional Early Exit	Transitional Late Exit	Dual Language	Other (please specify)
Grade Levels	PK-6 th	PK-3 rd	PK-6 th	PK-6 th	
Percentage of Language Instruction K grade	90 % Spa. 10 % Eng.	70% Spa. 30% Eng.	50/50	10% Spa. 90% Eng. 50/50	
Percentage of Language Instruction First grade	90 % Spa. 10 % Eng.	70% Spa. 30% Eng.	50/50	10% Spa. 90% Eng. 50/50	

Please type a short description of the bilingual first grade literacy program in the district.

Please type description of schools that offered DLL and/or Accelerated Reading Instruction intervention (small group supplemental literacy instruction) in Spanish for first graders (from the DLL and Title I reports).

Preliminary Data- Page 4 of 4

	2005-2006
Number of schools with bilingual first grade in the district	
Number of DLL schools	
Number of DLL teachers in each school	
Number of students who received DLL per campus	
Number of schools that offered first grade Accelerated Reading Instruction intervention (small group supplemental literacy instruction) in Spanish	
Number of teachers who delivered first grade Accelerated Reading Instruction intervention (small group supplemental literacy instruction) in Spanish in each school (also how many were DLL trained)	
Number of first grade students in bilingual education who received Accelerated Reading Instruction intervention (small group supplemental literacy instruction) per campus	
Early Literacy Assessment used: <i>Tejas LEE</i> <i>Instrumento de Observación</i> PAPI-S <i>Evaluación del Desarrollo de la Lectura</i> Other (Specify)	

APPENDIX C
DATA COLLECTION CHART *TEJAS LEE*

DATA COLLECTION CHART *Tejas LEE*

Tejas LEE

District Code XD1
Campus Code XCA

Student Code Number	Test Date 00/00/00	1 Conocimiento de sonidos		2 Unión de sílabas		3 Segmentación sílabas		4 Omisión de sílabas inicial		5 Omisión de sílabas final		6 Identificación sonido inicial		7 Unión de los sonidos	
		D	ND	D	ND	D	ND	D	ND	D	ND	D	ND	D	ND
XD1-XCA-S1 (Beg.) B															
XD1-XCA-S1 (Mid.) M															
XD1-XCA-S1 (End) E															
XD1-XCA-S2 B															
XD1-XCA-S2 M															
XD1-XCA-S2 E															

Student Continued		8 Segmentación sonidos		8 Omisión sonido inicial		9 Omisión sonido final		10 Grado/Nro.		11 Exactitud		12 Fluidez (PLCPM)		13 Comprensión Exp. Imp.	
		D	ND	D	ND	D	ND								
XD1-XCA-S1 (Beg.) B															
XD1-XCA-S1 (Mid.) M															
XD1-XCA-S1 (End) E															
XD1-XCA-S2 B															
XD1-XCA-S2 M															
XD1-XCA-S2 E															

D = Desarrollado
ND = No Desarrollado

APPENDIX D

DATA COLLECTION CHART Data Collection Chart

EVALUACION DESARROLLO DE LA LECTURA

DATA COLLECTION CHART *EVALUACIÓN DEL DESARROLLO DE LA LECTURA*

EDL

District Code XD1
Campus Code XCA

	Test Date 00/00/00	1f. Registro de Lectura (Nivel Fácil)			1i. Registro de Lectura (Nivel Instruccional)			1d. Registro de Lectura (Nivel Difícil)		
Student Code Number		Error Rate	Accuracy	Self Correction Rate	Error Rate	Accuracy	Self Correction Rate	Error Rate	Accuracy	Self Correction Rate
XD1-XCA-S1 (Beg.) B										
XD1-XCA-S1 (Mid.) M										
XD1-XCA-S1 (End) E										
XD1-XCA-S2 B										
XD1-XCA-S2 M										
XD1-XCA-S2 E										

		2i. Comprensión (Independiente)			2in. Comprensión (Instruccional)			2f. Comprensión (Frustración)		
Student Continued		No. Correct			No. Correct			No. Correct		
XD1-XCA-S1 (Beg.) B										
XD1-XCA-S1 (Mid.) M										
XD1-XCA-S1 (End) E										
XD1-XCA-S2 B										
XD1-XCA-S2 M										
XD1-XCA-S2 E										

APPENDIX E

DATA COLLECTION CHART

INSTRUMENTO DE OBSERVACION

DATA COLLECTION CHART INSTRUMENTO DE OBSERVACIÓN

Instrumento de Observación

District Code XD1

Campus Code XCA

	Test Date 00/00/00	1f Registro de Lectura (Nivel Fácil)			1i Registro de Lectura (Nivel Instructional)			1d Registro de Lectura (Nivel Difícil)			2 Identificación de Letras	
Student Code Number		Error Rate	Accuracy	Self Correction Rate	Error Rate	Accuracy	Self Correction Rate	Error Rate	Accuracy	Self Correction Rate	Raw Score	Stanine
XD1-XCA-S1 (Beg.) B												
XD1-XCA-S1 (Disc.) M												
XD1-XCA-S1 (End) E												
XD1-XCA-S2 B												
XD1-XCA-S2 M												
XD1-XCA-S2 E												

		3 Prueba de Palabras		4 Conceptos del Texto Impreso		5 Escritura de Vocabulario		6 Dictado	
Student Continued		Raw Score	Stanine	Raw Score	Stanine	Raw Score	Stanine	Raw Score	Stanine
XD1-XCA-S1 (Beg.) B									
XD1-XCA-S1 (Disc.) M									
XD1-XCA-S1 (End) E									
XD1-XCA-S2 B									
XD1-XCA-S2 M									
XD1-XCA-S2 E									

APPENDIX F
DESCRIPTION OF THE DISTRICTS

DESCRIPTION OF THE DISTRICTS

INDICATOR	DISTRICT One	DISTRICT Two	DISTRICT Three
1. Accountability Ratings	Academically Acceptable	Academically Acceptable	Academically Acceptable
2. Total Number of Schools	57	35	50
3. Total Students	43,815	20,831	29,348
STUDENT POPULATION			
4. % African American	8	10	11
5. % Hispanic	16	46	38
6. % White	69	43	49
7. % Other(Asian/Pacific Islander or Native American)	7	1	3
8. % Economically Disadvantaged	12.4	47.2	56.4
9. % Special Education	11	10	13
10. % Bilingual/ESL Education	8	7	8
11. % Career & Technology Education	13	17	21
12. % Gifted & Talented Education	8	7	8
13. Attendance Rate (2002-03)	96.7	95.2	95.0
14. Annual Dropout Rate Gr. 7-8	0.1	0.2	0.2
15. Four-year Dropout Rate	1.4	5.8	4.6
16. Number of Graduates	2,525	1,238	1,587
17. % Graduated	92.5	84.4	85.5
TAKS PERCENTAGE OF STUDENTS PASSING - ALL GRADES SPRING 2004			
18. TAKS All Tests Taken	83.0	70.0	68.0
19. TAKS Reading/Ling. Lang. Arts	94.0	87.0	86.0
20. TAKS Writing	97.0	88.0	89.0
21. TAKS Mathematics	89.0	78.0	76.0
22. TAKS Science	85.0	75.0	73.0
23. TAKS Social Science	97.0	93.0	90.0
24. African American	67.0	52.0	50.0
25. Hispanic	66.0	60.0	57.0
26. White	88.0	84.0	80.0
27. Other	89.0	83.0	73.0
28. Economically Disadvantaged	62.0	58.0	58.0
29. SDAA MET ARD	84.0	78.0	83.0

COLLEGE ADMISSIONS TESTS (CLASS OF 2003)			
30. Percent Tested	86.0	52.3	49.7
31. Percent At Or Above Criterion	38.1	38.9	31.5
32. SAT: Mean Total Score	1077	1047	1045
33. ACT: Mean Composite Score	21.1	21.4	20.4
STAFF			
34. Total Staff FTE	5,051	2,593	3,692
35. Total Teacher FTE	3,063	1,362	2,026
36. % Central/Administrative	1	1	1
37. % School/Administrative	3	3	3
38. % Professional/Support Staff	9	10	9
39. % Teachers	61	53	55
40. % Educational Aides	10	6	7
41. % Auxiliary Staff	17	28	25
42. Average Central Administrator Salary	86,442	79,829	82,967
43. Average School Administrator Salary	65,710	53,836	58,737
44. Average Professional Support Staff Salary	47,942	44,534	47,082
45. Average Teacher Salary	42,864	38,811	39,655
46. % Minority	13	36	17
47. Number Of Students Per Total Staff	8.7	8.0	8
48. Number Of Students Per Teacher	14.3	15.3	14.5
TEACHERS			
49. Teachers % With 5 Or Fewer	35.8	32.5	31.3
50. Average Years of Experience	11.3	11.9	12.2
51. % Advanced Degrees	24.0	19.2	18.1
52. Teacher Turnover Rate	12.1	15.9	11.6
53. % African American	3	4	2
54. % Hispanic	5	16	7
55. % White	91	80	91
56. % Other	1	1	0
57. % Regular Education	70	71	72
58. % Special Education	13	7	10
59. % Compensatory Ed.	3	7	4
60. % Bilingual/ESL Ed.	4	7	5
61. % Career/ Technology Ed.	4	3	5
62. % Other Education & G T	6	5	4

TAXES AND ACTUAL REVENUES			
63. Taxable Value Per Pupil	368,868	224,308	180,437
64. Adopted Total Tax Rate	1.770	1.627	1.590
65. Total Revenue	350,070,470	149,163,731	209,149,263
66. Total Revenue Per Pupil	8,156	7,208	7,171
67. % State	15	36	46
68. % Local And Other	82	51	43
69. % Federal	3	13	11
FUND BALANCES			
70. Fund Balance (End Of 2002- 03)	46,150,567	19,410,998	36,460.870
71. % Fund Balance (Of 2003-04 Budget)	16	17	22
ACTUAL EXPENDITURES			
72. Total Expenditures	337,292,511	146,444,638	206,870,755
73. % Instructional	52	56	56
74. % Central Administrative	5	4	5
75. % School Leadership	5	5	5
76. % Plant Services	8	10	9
77. % Other Operating	15	18	17
78. % Non-Operating	14	6	8
79. Total Operating Expenditures	291,273,054	137,548,570	191,152,660
80. Total Operating Expend. Per Pupil	6,786	6,647	6,554
ACTUAL INSTRUCTIONAL EXPENDITURES			
81. Total Instructional Expenditures	176,825,290	81,986,269	116,385,167
82. Total Instructional Expend. Per Pupil	4,036	3,936	3,966
83. % Regular Education	67	63	66
84. % Special Education	17	10	14
85. % Compensatory Education	5	15	11
86. % Bilingual/ESL Education	4	6	4
87. % Career and Technology Education	4	4	4
88. % Gifted & Talented Education	2	2	0

ADDITIONAL INFORMATION			
89. Number Students Gr. 1	3,653	1,550	2,297
90. Class Size Average Gr. 1	19.1	16.8	15
91. Student Enrollment in Bilingual/ESL Programs	3,762 or 8.3%	1,509 or 7.3%	2,525 or 8.5%
92. Teachers in Bilingual/ESL Program	171.0 or 5.2%	63.2 or 4.5%	97.9 or 4.7%
93. 2005 TAKS 3 rd Gr. Reading English District	96%	90%	93%
94. 2005 TAKS 3 rd Gr. Reading English LEP	87%	82%	83%
95. 2005 TAKS 3 rd Gr. Reading Spanish District	59%	60%	79%
96. 2005 TAKS 5th Gr. Reading English District	89%	77%	80%
97. 2005 TAKS 5th Gr. Reading English LEP	28%	16%	46%
98. 2005 TAKS 5th Gr. Reading Spanish District	55%	59%	55%

Adapted from: TEA, PEIMS Snapshot and Academic Excellence Indicator Reports, 2006

APPENDIX G

STUDENT OUTCOMES GRAPHS FIGURES 2-19

STUDENT OUTCOMES GRAPHS

Figure 2

Tejas LEE Section 1- Letter-Sound Identification

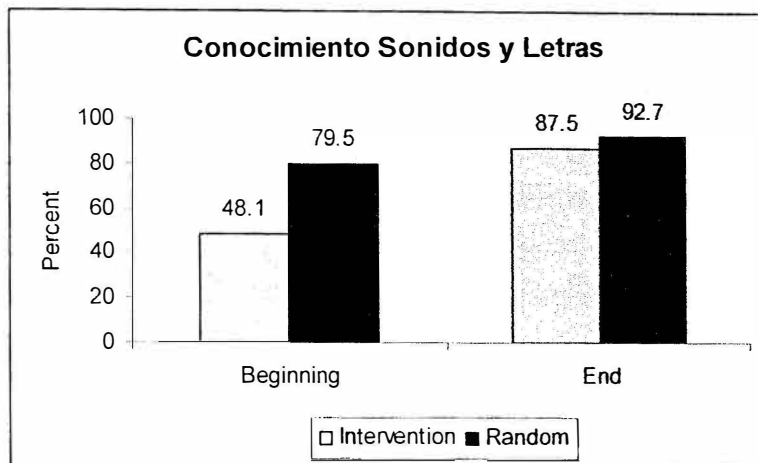


Figure 3

Tejas LEE Section 2- Blending and Segmenting Syllables

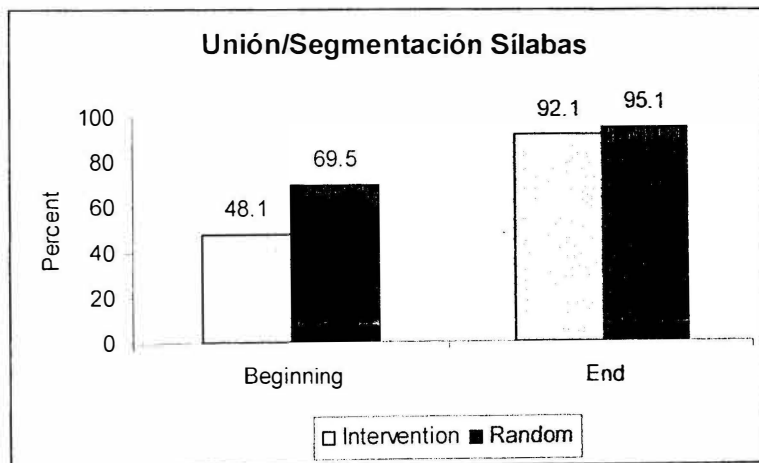


Figure 4

Tejas LEE Section 3- First Syllable Omission

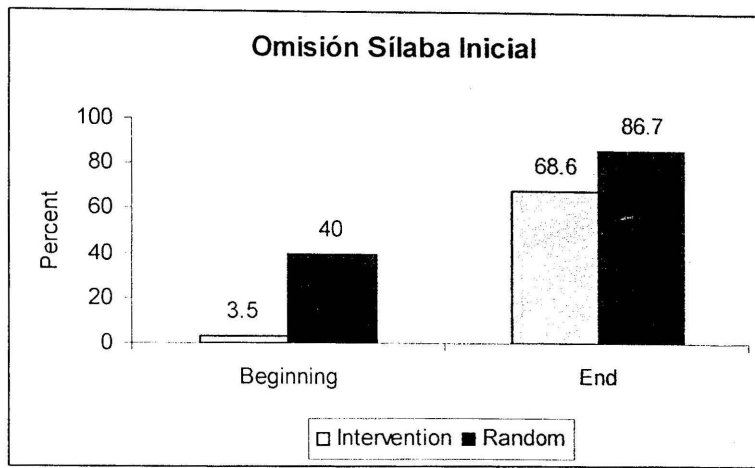


Figure 5

Tejas LEE Section 4- Last Syllable Omission

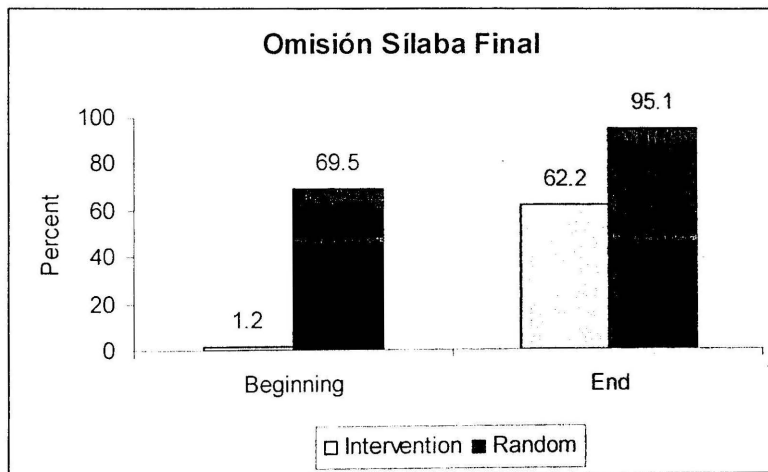


Figure 6

Tejas LEE Section 5- First Sound Identification

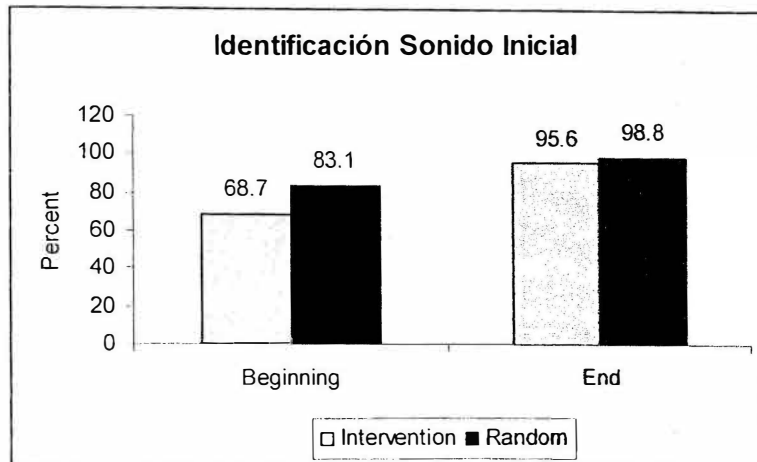


Figure 7

Tejas LEE Section 6- Blending and Segmenting Phonemes

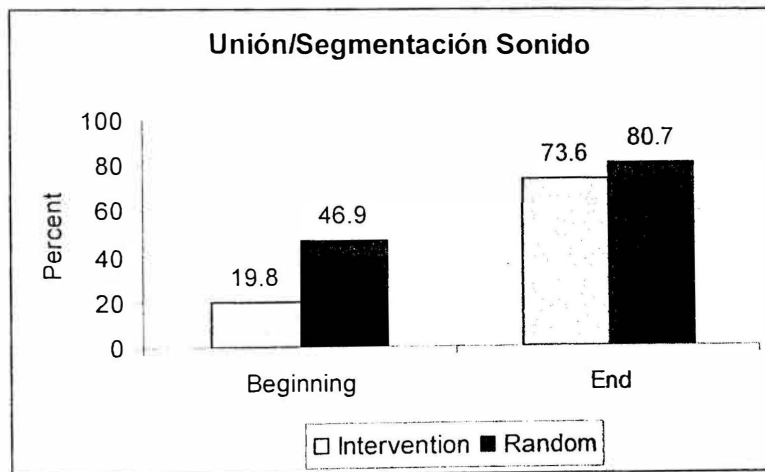


Figure 8

Tejas LEE Section 7- Initial Phoneme Omission

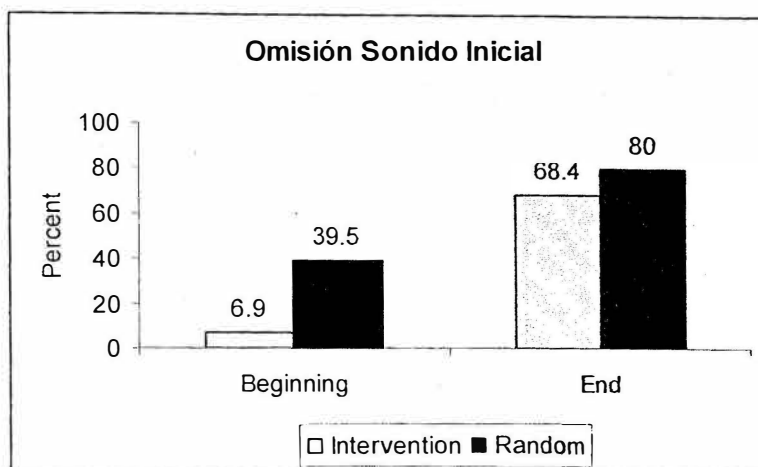


Figure 9

Tejas LEE Section 8- Final Phoneme Omission

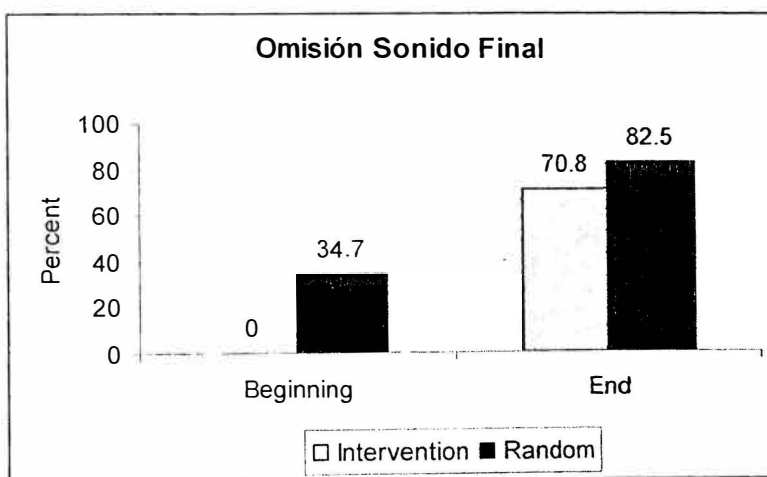


Figure 10

Tejas LEE- Reading Accuracy

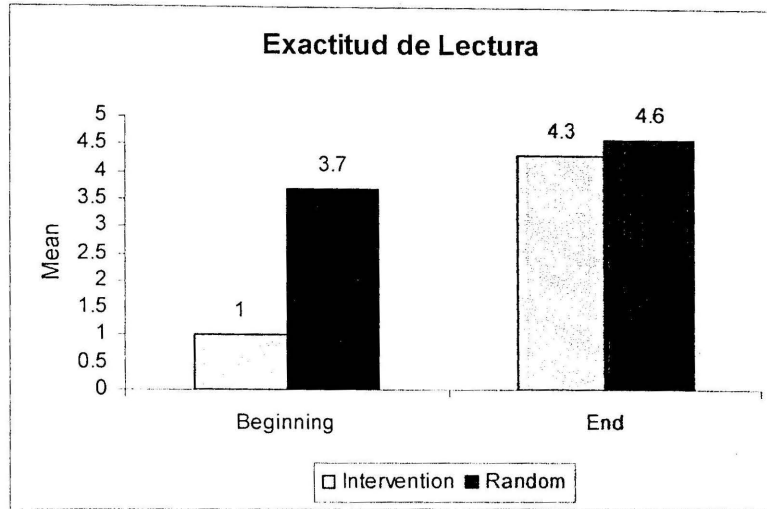


Figure 11

Tejas LEE- Reading Fluency

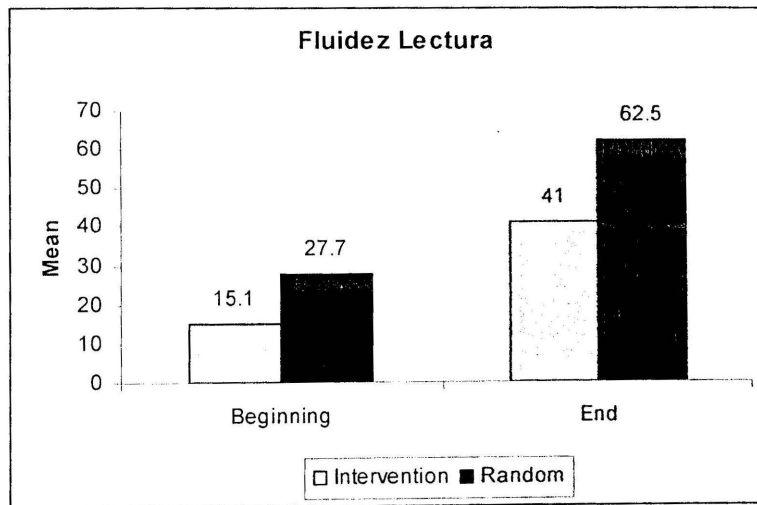


Figure 12

Tejas LEE- Reading Comprehension

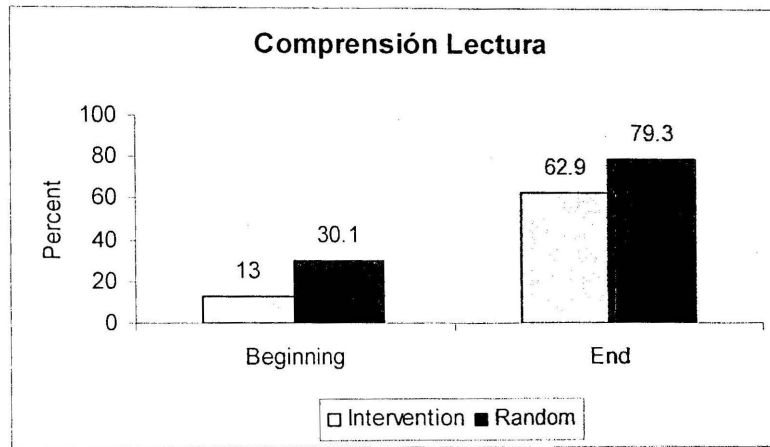


Figure 13

Instrumento de Observación- Letter Identification

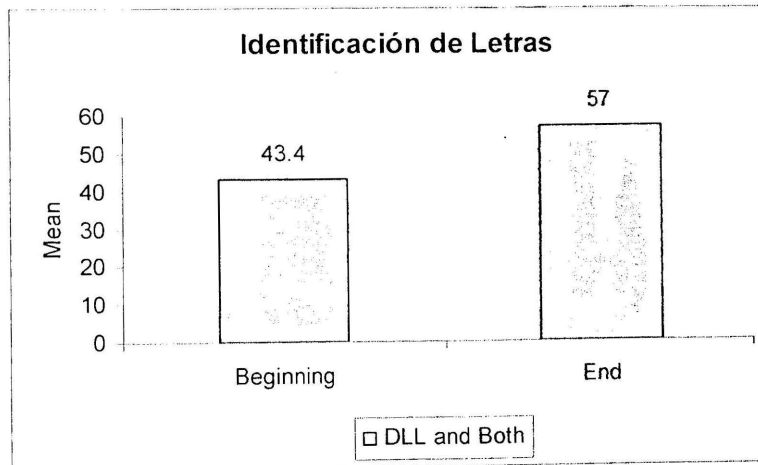


Figure 14

Instrumento de Observación- Word Test

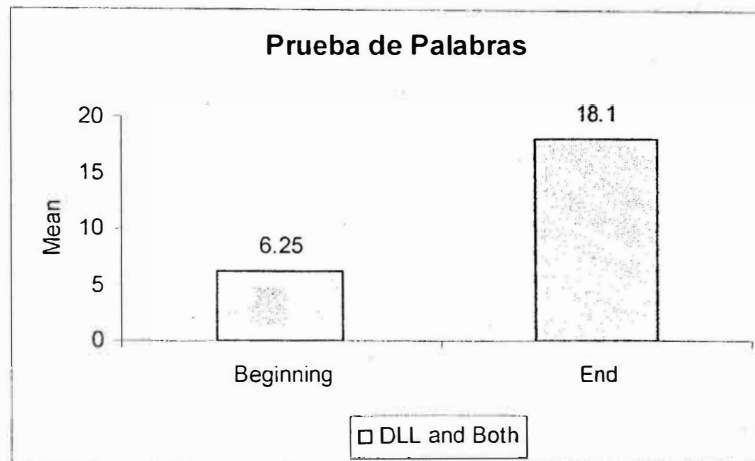


Figure 15

Instrumento de Observación- Concepts About Print

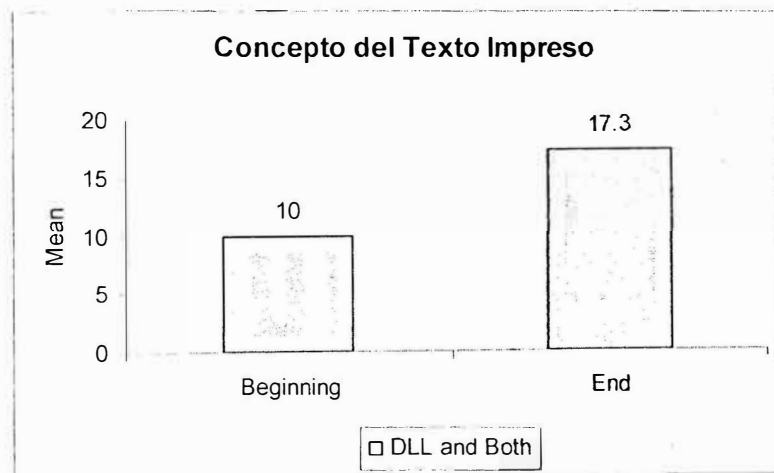


Figure 16

Instrumento de Observación- Writing Vocabulary

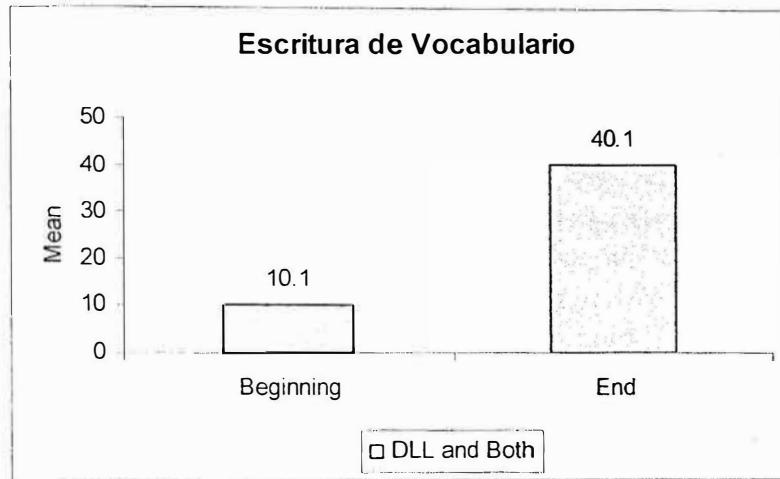


Figure 17

Instrumento de Observación- Hearing and Recording Sounds in Words

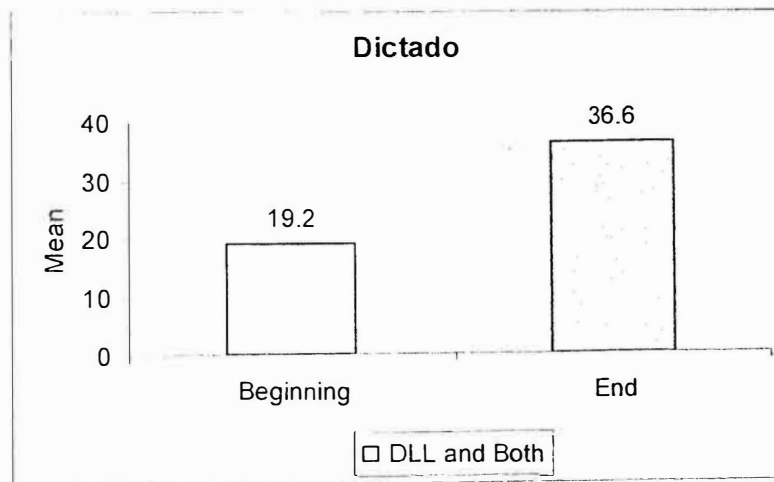


Figure 18

Instrumento de Observación- Running Record

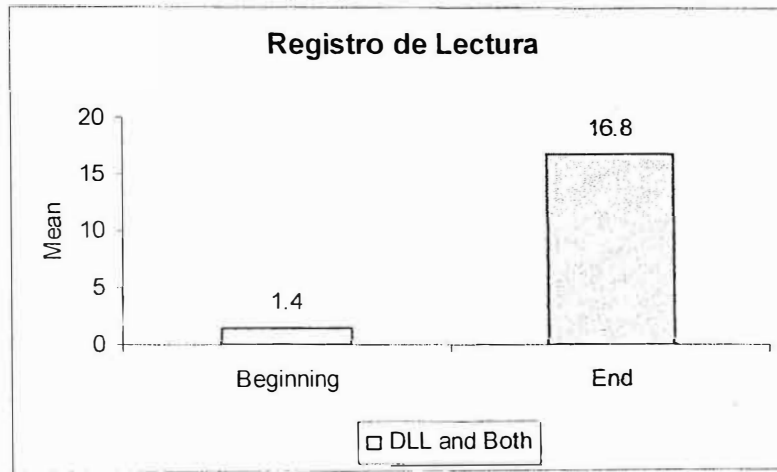


Figure 19

Evaluación Desarrollo Lectura- Text Reading Level

