A COMPARISON STUDY OF REMEDIATION SERVICES OFFERED TO LATINO

STUDENTS IN THE PRIMARY GRADES

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Abstract

This comparative study was designed to assess the efficacy of *Reading A-Z*, an online reading program with differentiated reading levels from kindergarten to sixth grade, on first through third grade Latino students. Ten Virginia elementary schools in a single school district participated in this study of tutoring services offered to low-performing, Spanish-speaking students. Increases in individual instructional reading levels (IRL) and word recognition in isolation (WRI), as measured by Phonological Awareness Literacy Screening (PALS) assessment, were documented using pretest scores collected in fall 2007 with posttest scores collected in spring 2008. An independent *t*-test was used to determine if differences in the treatment and control groups occurred prior to the intervention being implemented. An independent *t*-test was also used to determine if differences in the posttest scores of the two groups were prevalent after the intervention. No significant differences were found, and a paired sample *t*-test was used to calculate increases in IRL and WRI of the 46 Latino students in this study. Results suggest that increases were recognized in both the treatment and control groups for IRL and WRI. The increase in scores using *Reading A-Z* was no greater than with normal and accepted forms of remediation.

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God led me to this graduate program, and I leave it with an excellent education, an appreciation for ethical choices, and lifelong friends who share the love of Jesus. With Him, all dreams are possible!

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Chapter I

Introduction

Reading is a skill used daily by children as well as adults. As children mature and are expected to complete more difficult reading assignments, reading proficiency is necessary to continue to the next grade level and eventually graduate from high school. Even adults need proficient reading skills to complete a job application, get a driver's license, read road signs, and understand workplace memos; all of these require adequate literacy skills that begin in elementary school. For students who speak Spanish in the home, reading, speaking, and writing English in school may prove to be a difficult task for them. For English Language Learners (ELL), reading is usually difficult and they tend to read below their grade level as early as their kindergarten year.

On January 8, 2002, President George W. Bush signed into law the No Child Left Behind (NCLB) Act. This Act is meant to ensure that the economically, academically, and culturally disadvantaged children achieve academic proficiency (Henry County Public Schools, 2006; Virginia Department of Education, 2006). The three principles of NCLB -- standards, assessment, and accountability -- ultimately make the school systems responsible for student learning and progress. Each state in America has its own specific standards at every grade level with these standards tested in the spring of each year, and assessment results are released to the public.

Local, state, and federal governments recognize the accountability of teachers and schools for low assessment scores. Under NCLB, a school system has three years to show improvement toward passing rates in student performance on state standardized

assessments and receive accreditation status. With this expectation comes continued financial support from the state and federal governments to operate school divisions. When a school fails to earn accreditation after four years because of failing standard assessment scores, the state will restructure the school. The state and federal governments will then determine how school funds for the locality will be used. With each school division having individual, specific needs, passing rates are crucial for continued school funding. Each year the percentage of passing scores increases (Appendix A) with a requirement of 100% of students passing in the year 2014 in every school division in America (Virginia Department of Education, 2006).

Another Federal Government guideline, Adequate Yearly Progress (AYP), attempts to close the achievement gap and equalize educational opportunities for disadvantaged children (Henry County Public Schools, 2006; United States Department of Education, 2008). The federal system divides the students into seven subgroup categories: Caucasian, African American, special education, Hispanic, Limited English Proficient, low socioeconomic, and all students combined (Horne, 2007; Virginia Department of Education, 2006). Each subgroup requires a 70% passing percentage rate in five subject areas: reading, math, social studies, science, and writing. If any one subgroup in a school falls below the 70% standard score, the entire school fails, and AYP is denied for that year. Educators have many opinions on this guideline for accreditation; Puriefoy (2003) states that racial segregation has been unconstitutional for many years, and the government's attempt to equalize education is actually promoting segregation by comparing scores of the different subgroups.

Although the Federal Government creates the rules by which all states must abide, it only funds nine percent of the educational guidelines it composes (Aud, 2007). When subgroups do not make AYP, schools must provide remediation services, including in-school tutoring using already allocated government funds. The goal of every school system includes meeting AYP goals and retaining allocated government funds.

This research study examined Latino students in first through third grades at ten elementary schools and compared those who received remediation using *Reading A-Z* to those that did not over an 18-week period. A preassessment determined that these students were reading below their grade level, and they received daily remediation to strengthen their reading skills. The research compared students in a treatment group to a control group using a computerized supplemental reading program. This chapter presents the background of the study, statement of the problem, research questions, statement of the null hypothesis, significance of the study, and overview of methodology. Chapter one concludes by defining key terms used in this research for better understanding.

Background of the Study

A major concern for the United States in the last decade is the number of students who graduate from high school without basic reading skills. Many of these students are economically and culturally disadvantaged. The Federal Government insists that the achievement gap between races and ethnicity must become narrower (United States Department of Education, 2008) to meet AYP goals. While this view of student achievement appears to promote student equality, results from universal assessments are unfair to certain subgroups, especially the Spanish-speaking population in this country. When Latino immigrants start school, they do not have the English vocabulary that

American children possess; therefore, they are attempting to speak and read English simultaneously.

The vast majority of ELL in southwestern Virginia, where this study took place, migrated to the United States from Mexico (Virginia Department of Education, 2006). The familial and cultural characteristics of Latinos make reading a second language on-grade level a difficult task for the students in a school where their native language is not spoken. For example, the Latino culture resists daycare for preschool children (Weigel & Martin, 2006; Zaman, 2006), communicates less with their children than Americans (Jambunathan, Burts, & Pierce, 2002), places the communities' needs above those of the individual (Weigel & Martin, 2006; Zhang, 2001), and gives good behavior a higher priority than academic performance in school (Reese, 2001). With school systems now being held accountable for every student's achievement, American educators are learning about and accepting cultural differences, while finding ways to enhance the English vocabulary and reading levels of Spanish-speaking children.

Many elements work together to produce students whose instructional reading level, the level at which lessons are constructed, is the grade in which they receive classroom instruction. The five components of language literacy -- phonological awareness, phonics, vocabulary, fluency, and reading comprehension -- are deliberately taught in this sequential order so that one can build upon the other. This sequence is used by textbook companies that supply basal readers and teachers' manuals for primary and elementary schools throughout the United States. Educators also follow this sequence as the preschool and kindergarten grades focus on phonological awareness, first grade on phonics, and second grade and higher on vocabulary, fluency, and reading

comprehension. It is assumed by textbook companies and educators that a student enters school already speaking and understanding the English language. This is unrealistic for Latinos, most of whom speak Spanish in the home and have little more than conversational proficiency in English.

The first component of language literacy, phonological awareness, includes rich literary learning environments with sound-symbol correspondence being an extremely important concept for Spanish-speaking children in their quest to become not only speakers but also readers of English (Leafstedt & Gerber, 2005; McTavish, 2007; Nelson, Benner, & Gonzalez, 2005). Two separate languages can have completely different letters and sounds that pose problems before the reading process begins. When bilingual students have problems in the articulation and voicing of syllables (Branum-Martin, Carlson, Fletcher, Francis, Mehta, & Ortiz, 2006; Yavas & Core, 2001) and in comprehending the meaning of new vocabulary words (Lindsey, Manis, & Bailey, 2003), bilingual students may require additional phonological awareness activities.

Phonics instruction, the second component of language literacy, builds on the sound system of phonological awareness to form simple, one-syllable words and later, multi-syllable ones. What begins as blending words for English-speaking students in reading is neither engaging nor meaningful for bilingual students who are still trying to interpret English vocabulary (Culatta, Aslett, Fife, & Setzer, 2004; Gest & Gest, 2005). The simple sounding out of words can cause misinterpretation by Latinos when many of the English language words have homonyms used throughout a reading passage and synonyms used interchangeably (Spencer & Guillaume, 2006).

One of the most important components for Latino students, vocabulary, requires an understanding of unfamiliar words when reading (Apthorp, 2006; Spencer & Guillaume, 2006, Vardell, Hadaway, & Young, 2006). A bilingual student may speak English in a way that commands perfect understanding of his second language when in reality the oral vocabulary is much stronger than the reading vocabulary. This socially based component for Latinos should include frequent discussions to enhance spoken and written vocabulary (Heller, 2006; Miller, Heilmann, Nockerts, Iglesias, Fabiano, & Francis, 2006; Schaughnessy & Sanger, 2005; Whitmore & Crowell, 2005-2006). The primary grades, kindergarten through second, allow for reading aloud and questioning techniques, but students in third through fifth grades are usually expected to read silently. Reading aloud, a necessary strategy for bilingual students, builds background knowledge of English words as Latinos have not had the advantage of speaking the English language for five years before attending school. Developing vocabulary enhances the other components of reading to produce a more literate student (Ajayi, 2005; Bromley, 2007; Echevarria, Short, & Powers, 2006).

Fluency, the fourth component in language literacy, recognizes the ease and speed at which a student reads a passage without rereading for meaning. In Latinos, fluency does not play a part in vocabulary development and can actually harm a student's progress when used as a predictor of reading achievement (Corn, 2006). Rereading passages develops a student's vocabulary more than attending to fluency rates that are measured using a standard formula of words per minute (Kuhn, 2004). More important to English-speaking students than to Spanish-speaking students, fluency does not hinder

the other components of language literacy in bilingual students (Corn, 2006; Dominguez de Ramirez & Shapiro, 2006).

The last component of language literacy, comprehension, requires the student to show knowledge of concepts, draw inferences from the passage, and understand what is read (Konold, Juel, & McKinnon, 1999). Limited background knowledge and English vocabulary in Latinos make reading comprehension more difficult in the elementary grades. As in all aspects of reading, written assessments are the standard practice of evaluation and in granting promotion to the next grade level. Because it does not allow for consideration of learning styles, standardized testing should not be used to assess reading comprehension in bilingual students (Fiene & McMahon, 2007).

The effective teaching strategies of the five components of language literacy determine a student's reading success. All of the components have an emphasis that is necessary to increase the instructional reading levels in all students, especially in bilingual students. Latino students need all five components for successful reading; however, the vocabulary portion is the most important for these students as their lack of English limits their overall reading performance.

Incorporating writing into the reading lessons is one way to enhance all of the components of language literacy, especially vocabulary. Writing activities that accompany the reading help students to practice oral segmentation (Fuhler, Farris, & Nelson, 2006; Gammill, 2006; Sluys & Laman, 2006) and involve less engaged students in the learning process (Knipper & Duggan, 2006; Moore-Hart, 2005). When Latinos are reading and writing below-grade level, additional assistance advances reading skills while acknowledging their individual differences.

Other ways to enhance language literacy include supplemental instruction activities that are differentiated according to the students' abilities (Gersten, Baker, Haager, & Graves, 2005; Gunn, Smolkowski, Biglan, & Black, 2002; Ortiz, Wilkinson, Robertson-Courtney, & Kushner, 2006; Otaiba, 2005; Saenz, Fuchs, & Fuchs, 2005; Santoro, Jitendra, Starosta, & Sacks, 2006). Offering this type of instruction, based on an individual's instructional reading level, allows for oral language to develop more fully, and provides skilled, repetitious practice that increases the motivation to learn (Panel on Early Reading, 2003).

Each child has a unique leaning style, but bilingual students have similar needs due to their lack of English vocabulary and benefit from reading nonfiction passages because real-life contexts help them visualize vocabulary words for meaning (Apthorp, 2006). Selecting highly visual literature containing photographs (Vardell, Hadaway, & Young, 2006) or that are related to scientific concepts that describe the natural world as children understand it are best for bilingual students (Spencer & Guillaume, 2006). Vardell, Hadaway, and Young state that concrete visuals in children's literature should be socially relevant, build upon their background knowledge, and motivate the students toward literacy learning. Positive attitudes about reading come from social contexts and nonfiction passages where the students relate the story to something familiar in nature (Calcutta, Aslett, Fife, & Setzer, 2004). Many textbook stories describe fictional characters and settings that have no cultural relevance to Latinos. Using nonfiction material during a remediation time increases the motivation to read and decreases students' frustration with their lack of English vocabulary.

Many articles pertaining to ELL state that reading aloud, reading nonfiction passages, and writing promote vocabulary development and increase reading skills in bilingual students. With Latinos' special needs in learning to read English, it would make sense to find a resource that would encourage oral reading, vocabulary development, written assignments and differentiated instruction to occur simultaneously, and provide ample nonfiction passages. The abundance of research validates the efficacy of using these techniques to develop English vocabulary in Latino students which *Reading A-Z* provides.

Reading A-Z

Reading A-Z (2007) is an online reading program that provides over 1,600 downloadable books and materials that range in reading levels of K.1 (first month of kindergarten) to 6.1 (first month of sixth grade) for teachers' convenience in selecting books based on each student's reading level. This program allows students to read or listen online, take a quiz on the book, print, mark, and highlight the books, take the book home for additional practice, and complete writing activities that support the guided reading. The leveled books and lessons are "appropriate for all sorts of reading programs, including K-6, ESL/ELL, special education, and remedial reading. The program's downloadable books and lesson plans are standards based and results oriented" (*Reading A-Z*, 2007, p. 2).

Educators nationwide cite *Reading A-Z* as more than appropriate for classroom and remedial instruction. Educators in the elementary, middle, and high school settings praise this program for its accessibility and as an affordable complement to instruction. Resource teachers, private and Christian schools, and educators in 11 countries commend

this program for its tests, fluency passages, differentiated instruction, and writing activities that accompany each book (*Reading A-Z*, 2007). Additional materials and monthly updates offer educators a variety of fiction and nonfiction reading passages to incorporate holidays, events, or sports to spark children's interest.

New books added monthly to the *Reading A-Z* website provide educators with supplemental resources and accompanying lesson plans for struggling readers. This online reading program offers thousands of printable materials that teach guided reading, phonics, vocabulary, fluency, poetry, and alphabet activities. Several awards bestowed upon *Reading A-Z* in the previous four years include the Parent's Choice Award, Global Learning Initiative Award, and Teacher's Choice Award (*Reading A-Z*, 2007).

A professor of reading education credits *Reading A-Z* with creating a program that mirrors best practices as described in the National Reading Panel's report to make reading a top priority (Klein, 2008). She believes that it incorporates all the components of language literacy that are needed to achieve reading achievement. Its accessibility, differentiated levels of reading, accompanied writing activities, and varied assessments make it ideal for teacher instruction and student learning.

Statement of the Problem

NCLB demands that students of all ethnic groups achieve on the same level but does not take into consideration language barriers and their effects on standardized test scores. Teaching a Spanish-speaking child to read in English requires understanding his or her individual abilities and applying tactics in the classroom to foster his or her reading skills. Some students learn to read by using context clues in passage reading while others

need repetition of new vocabulary words in isolation. Knowing student differences assists the teacher in selecting resource tools that encourage reading development.

This study investigates the effectiveness of *Reading A-Z* to increase the instructional reading level of Latino students in grades one, two, and three. These students received daily remediation in groups no larger than two over an 18-week period and were compared to a group of students who received another form of remediation. The first instructional strategy for the treatment group involved using books that corresponded to the instructional reading level of each Latino student based on a preassessment.   Another instructional strategy involved oral reading by students with the opportunity to ask questions and discuss the book in detail. The last strategy under investigation was the daily use of writing activities provided by *Reading A-Z* that corresponded with the book read by the students.

The researcher designed this study to answer the following two research questions:

1. Will implementation of *Reading A-Z* have a greater impact than the normal and accepted sources of remediation on instructional reading levels for low-performing, Spanish-speaking students as measured by the Phonological Awareness Literacy Screening assessment?

2. Will implementation of *Reading A-Z* have a greater impact than the normal and accepted sources of remediation on word recognition in isolation for low-performing, Spanish- speaking students as measured by the Phonological Awareness Literacy Screening assessment?

To answer these questions, the researcher conducted a quasi-experimental research study.

Statement of Null Hypotheses

The following null hypotheses were posed:

1.   There will be no significant difference in instructional reading levels, as measured by the Phonological Awareness Literacy Screening, for low- performing, Spanish-speaking students who received *Reading A-Z* and those that received normal and accepted sources of remediation.

2.   There will be no significant difference in word recognition in isolation, as measured by the Phonological Awareness Literacy Screening, for low-performing, Spanish-speaking students who received *Reading A-Z* and those that received normal and accepted sources of remediation.

Significance of the Study

With the Federal Government's emphasis on AYP and teacher accountability, school divisions make accommodations in their budgets to ensure that all subgroups of students score at or above their grade level in reading. School systems attempt to locate and purchase resources that assist the teachers in the classroom. The school system in this research study spends $20,000 annually to provide its teachers with *Reading A-Z*. If this study confirms that *Reading A-Z* helps ELL, then it is money well spent. If the results are opposite, the money allocated to *Reading A-Z* should be shifted to a more beneficial program.

The independent variable, *Reading A-Z*, incorporates all of the elements needed to improve the instructional reading levels of Latino students whose second language is English. Prior research suggests that instruction given to bilingual students should include the following: (a) differentiated instruction; (b) opportunities to read aloud; (c)

nonfiction material; and (d) writing activities that build on the reading passages. This research study incorporates these activities during remediation periods and could provide research support for effective daily remediation of Latino students in the primary grades. This study will determine whether or not *Reading A-Z* improves the instructional reading level and word recognition in isolation among first, second and third grade Latino students.

Overview of Methodology

This quasi-experimental research study included 46 bilingual students in first, second, and third grades whose parents migrated to the United States from Mexico. All of the students took an individual pretest in the fall of 2007 to determine their instructional reading level and ability to recognize words in isolation with the posttest conducted in the spring of 2008 using the Phonological Awareness Literacy Screening (PALS) assessment. Before the study began, all of the Latino students in grades one, two, and three in a southwestern Virginia school system received a parental consent form. Although 128 primary Latino students in 11 elementary schools received forms, only 74 parental consent forms were returned from 10 of the schools. After consulting with the reading specialists at each elementary school, 47 of the 74 students who had failed the PALS assessment were chosen for this study. One student moved to Mexico during the research study with 46 students remaining at the end of the research.

The Latino students received 30 minutes daily of reading remediation from a school-employed tutor. *Reading A-Z* is available to every faculty member of the school system, and the researcher conducted a training session to emphasize the positive aspects of this program. All tutors conducted remediation sessions based on their preferences for

materials or the classroom teacher's recommended assignment. Two of the ten schools were required to use specific materials and reading series under the provisions of a state grant awarded to them based on their students' socioeconomic status and low Standards of Learning (SOL) scores. Students who were using *Reading A-Z* were assigned to the treatment group, and students who were receiving remediation using other materials were assigned to the control group. The remediation took place over an 18-week period in which the researcher compared and analyzed the data collected on the Latino students.

Definition of Key Terms

The following terms have been defined for the purposes of this study.

1.   *Comprehension.* The ability to understand, reflect on, and learn from written text.

2.   *Differentiated (or supplemental) Instruction.* The instruction or delivery of instruction that recognizes each student's readiness level by instructing each student according to his or her particular level of learning.

3.   *English Language Learners.* Students whose English skills are so limited that they do not benefit from instruction taught entirely in English

4.   *Fluency.* The ability to identify words accurately and to read text quickly with expression.

5.   *Instructional Reading Level.* The grade level at which an assessment proves a child's level to read and understand when taught.

6.   *Latino.* A person of Latin American descent often living in the United States (American Heritage Dictionary, 2006). In this research study the term refers to Spanish-speaking students from Mexico.

7.   *Oral Language.* The ability to identify words accurately, and predict and interpret the meaning of the spoken and written language.

8.   *Phonics.* Knowledge of the relationship between written letters and spoken sounds.

9.   *Phonological Awareness.* The ability to identify and manipulate the individual sounds in oral language.

10.   *Remediation (or tutoring).* The act or process of correcting a deficiency (American Heritage Dictionary, 2006).

11.   *Vocabulary.* The ability to understand and correctly use unfamiliar words in speech or print.

12.   *Word Recognition in Isolation.* The ability to recognize words without the need to decode them.

Chapter II

Review of the Literature

The Phonological Awareness Literacy Screening (PALS) assessment (Invernizzi, Juel, & Meier, 2005) determines a student's level of reading and comprehension. There are three reading levels that assist the classroom teacher in recognizing the grade level in which each student reads and comprehends. The independent level of reading is the level at which students can read passages alone and without much difficulty. The level of frustration is the level at which the passages are too difficult for the students to read or comprehend; therefore, they derive no benefit from the exercise. Between these two extremes is the instructional reading level. Students at this level can read independently when required, but they can also follow the teacher in reading assignments without becoming frustrated. PALS describes a student's instructional reading level as the ability to read at least 75% or more of the words correctly in isolation, to read a passage with at least 90% accuracy, to read at least 60 words per minute, and to read with expression. Determining a student's instructional reading level is beneficial to the student because classroom teachers use materials that incorporate reading passages written at or above grade level. Students whose instructional reading levels are at or above their grade level will read with ease, enjoy reading, want to read more challenging material, and ideally read in their leisure time.

Chapter two contains nine sections: Cultural Characteristics of Latinos, Oral Language, Cross Linguistic Transfer, Five Components of Language Literacy, Writing, Instructional Reading Level, Word Recognition in Isolation, Remediation, and

Differentiated Instruction. This chapter begins with three sections describing cultural issues that affect Latino children's readiness skills and their ability to read on grade level at the same pace as English-speaking children in the primary and elementary grades. Sections four and five describe reading instruction that assists Latinos and outlines the necessary components needed to learn to read, to continue progressing in literacy, and to stay on target for grade level instructional reading. Sections six and seven describe the components measured by the assessment tool in this research and their significance in students' reading achievement. Finally, sections eight and nine describe individual learning styles of Latinos with emphasis on remediation services and differentiated instruction rendered to those reading below grade level. All sections in this chapter have an impact on Latino students' language literacy.

Cultural Characteristics of Latinos

The Latino population has distinctive cultural beliefs about their home environment, attitudes, socialization, school environment, and their view of native-born Americans. These beliefs might affect Latino students' readiness skills before entering kindergarten and their ability to read a second language.

Home Environment. The Latino child's home environment is likely to be different from that of an English-speaking student. Jambunathan, Burts, and Pierce (2000) and Reese (2001) state that the dominant figure in the Latino household is the father, and the mother is submissive in nature. Maintaining close ties with the family, even after marriage, is important. Latino couples live with members of their extended family and rely upon each other for problem solving in stressful times (Jambunathan, Burts, & Pierce). Reese discloses that members of the older generation are highly

respected by all family members. Even young Latino children defer to their older

siblings and acknowledge them as leaders and partial caregivers.

     Cultural Attitudes. Many Latino families, especially recent immigrants, are in a

low socioeconomic bracket by American standards, but feel wealthy living in America

(Reese, 2001; Zaman, 2006). Reese adds that Latinos report that they encountered more

discrimination and class prejudice in Mexico than in America. The families want to

continue their native cultural practices, but realize that adopting some aspects of the

American culture is essential while living in the United States. Differences between the

Latino and American cultures create situations that affect the child's reading success in

school. Latinos adamantly refuse to send their children to preschool or daycare because

they believe that no stranger can give their children the kind of love and discipline that a

family member can (Weigel & Martin, 2006; Zaman). Reese explains that Latinos

believe that inadequate and ineffective punishment occurs outside the home, and they

believe consequences to negative actions promote good decision making.

     Social Environment. Latinos encourage their children to demonstrate acceptable

social behavior and adapt to their environment by interpreting the actions of others. If

Spanish is spoken in the home, parents allow their children to view English-speaking

television programs in hopes of exposing their children to a second language.

Jambunathan, Burts, and Pierce (2000) explain that this socializes children to life in the

United States. Children's English literature read in the home usually contain moral and

ethical lessons (Reese, 2001), but reading is not considered as important as daily physical

exercise (Zaman, 2006). Zaman asserts that one-third of Latinos in the United States

attend church services to socialize their children and to expose them to the English language, but not particularly for religious reasons.

School Environment. All learning for Latinos, starting with reading in the primary grades, is socially based with conversation and discussion used to master higher-order thinking skills (Heller, 2006/2007). Latinos learn more quickly when working in pairs because they can practice their new language with their English-speaking peers and simultaneously enhance their social skills (Weigel & Martin, 2006). Zhang (2001) claims that the Latino culture promotes sharing and mutual protection for survival purposes but this can create problems with punctuality in attendance and with homework because several people may work together to complete one person's assignments. Quite often, a Latino family has little to no understanding of technology or computers; therefore, the family can not locate the resources that a child needs to complete his or her school assignments (Chen & Dym, 2003). Completing school work is not considered important since Latino families prefer that their children love learning, not necessarily that they love school (Zaman, 2006) and place a much higher emphasis on their children's behavior than on their academic grades (Reese, 2001). These cultural beliefs have a tremendous impact on the education of Latino children in American schools that offer English-only teaching services.

View of Americans. Latinos settle in the United States for economic reasons. Their view of Americans is unfavorable as they believe that Americans' excessive freedom leads to a lack of control in their children (Reese, 2001). Reese explains that Latinos teach their children to be honest and respectful but believe that American children are not this way, and have a greater influence on the Latino children than their

parents. Latinos believe that Americans make unethical decisions that are disturbing.

They want their children to recognize the economic opportunities and benefits that the

United States offers, but they certainly do not aspire to emulate American behaviors.

Oral Language

Oral language, the ability to identify words accurately and predict and interpret

the meaning of the spoken word, is a precursor to learning to speak a language (Panel on

Early Reading, 2003). Vocabulary and syntax determine the future reading achievement

of Latino students who must show proficiency in speaking English before reading it

(Culatta, Aslett, Fife, & Setzer, 2004; Miller et al., 2006; Schaughnessy & Sanger, 2005).

Miller et al. further explain that the better the master of oral language, the faster the

progression when learning English vocabulary and reading independently. This suggests

that a child should be able to speak a language before he or she learns to read and write it.

Many Latino children, including those in this study, speak Spanish in the home

and are only exposed to English in public. This second language mainly occurs in a

conversational tone as an innocent bystander with no interaction for learning. To assist

Latinos in developing their oral language skills, the teacher may assign activities with

verbal exchanges between students who can help Latinos sharpen their English skills

(Whitmore & Crowell, 2005/2006), activate prior knowledge (Culatta, Aslett, Fife, &

Setzer, 2004; Heller, 2006), and provide oral activities that are stimulating and enjoyable

for the Latino children (Yopp & Stapleton, 2008). Conversational activities in the

classroom help Latinos develop their oral language skills by responding to others

(Schaughnessy & Sanger, 2005), promote the acceptance of diversity (Sink, Parkhill, &

Marshall, 2005; Whitmore & Crowell, 2005/2006), and allow for questions to be asked by the students (Heller, 2006).

Several researchers have studied ways to nurture the development of oral language in Latinos. Heller (2006) has found that students who were allowed to answer orally on tests had an average of 70% correct while those that had to write answers scored 50%. Sink, Parkhill, and Marshall (2005) report that elementary students' academic grades rose when their parents attended a weekly college class to learn English while their children engaged in verbal activities with a tutor. Orally practicing the English language for proficiency is not always an option in a public school due to teachers' attitudes and instructional techniques, but conversational speech has proven beneficial to ELL.

Upon mastering conversational English, bilingual students continue with oral language activities that promote reading aloud and sharing ideas, memories, or their future plans (Whitmore & Crowell, 2005/2006), and learning plurals, possessives, and rhymes (Schaughnessy & Sanger, 2005). Heller states that this is best accomplished in small groups where students discuss the story and react to voice tone, body language, and facial expressions of their peers for better understanding of the text. Heller, and Whitmore and Crowell also acknowledge the scarcity of nonfiction material in the primary and elementary grades that is clearer to Latinos who barely understand English. Culatta, Aslett, Fife, and Setzer (2004) confirm this and insist that meaningful text benefits students in learning a second language more than reading isolated words, and that a book with predictable events also encourages conversation among peers.

Miller et al. (2006) conducted a study of 1,531 Latino students in kindergarten through third grades and assessed their oral language skills while acquiring literacy in English. Auditory and visual materials were used to stimulate both sides of the brain for enhanced learning. Listening to stories, viewing pictures, and retelling stories allowed practice of oral language skills and the asking of pertinent questions for comprehension. Because Latinos speak a second language by hearing themselves and others talk, reading aloud produced English literacy at a faster pace in this particular study. The research suggests that allowing ELL to practice their language skills orally benefits them by enhancing reading skills.

Cross Linguistic Transfer

"Cross linguistic transfer" is children's ability to transfer the linguistic parts of their native language to learn a second language (Proctor, Carlo, August, & Snow, 2006). Research of bilingual Latino students confirms that strengths in one language are usually shared in another (Bialystok, 2002; Hudson & Smith, 2001; Kormi-Nouri, Moniri, & Nilsson, 2003; Manis, Lindsey, & Bailey, 2004; Miller et al., 2006; Rodriguez, 2001; Rosselli, Ardila, Salvatierra, Marquez, Matos, & Weekes, 2002; Yopp & Stapleton, 2008). Ideally, English reading instruction should occur only after language acquisition of the second language has reached the intermediate stage of development (Avalos, Plasencia, Chavez, & Rascon, 2007). Attempting any training before this time encourages paraphrasing for translation purposes only and will not cultivate the required decoding strategies needed for precise reading of a second language (Orellana & Reynolds, 2008).

Research indicates that Latinos who learned to read Spanish first were more likely to read a second language much faster than monolinguals. Each study documented in this section of chapter two has its own unique measured skill with all conclusions stating native language proficiency was not lost while developing a second language. The studies also suggest that native language strengths were also the strengths in the child's second language.

Kormi-Nouri, Moniri, and Nilsson (2003) compared 60 bilingual students to 60 monolingual and discovered learning a second language increases cognitive abilities of bilingual children and extends their memory, intelligence, creativity, analogical reasoning, and problem solving skills. Bilingual students organize information in the two languages before completing activities in the second language which decreases reading fluency when assessed using a words per minute (WPM) method. Fluency measures in this study proved that bilingual readers have a shorter attention span and must rely upon their long term memory for processing instead of their short term memory for decoding and recalling sounds.

A two-year observation in homes and classrooms of 18 fifth, sixth, and seventh grade students concluded that paraphrasing while speaking, reading, and writing was an important element in assimilating reading skills in a second language. Orellana and Reynolds (2008) noticed that many bilingual readers were never asked to summarize a story in their own words, retell a story, or paraphrase texts that they had read. The students who were given the opportunity to paraphrase and read and write simultaneously were better and more confident readers who connected emotionally with their teachers

and socially with their peers. Their paraphrased speech, reading, and writing improved over time along with their instructional reading levels.

Both studies used different teaching strategies and focused on varying aspects of literacy but arrived at similar conclusions. Cross linguistic transfer offers students many benefits when learning to speak and read a second language. They use knowledge from their native language to process sounds in English with studies confirming that bilingual children already reading in Spanish learn to read English at a much faster rate.

Five Components of Language Literacy

The federal program No Child Left Behind (NCLB) proposes that reading instruction include five components for successful reading: phonological – or phonemic - awareness, phonics, vocabulary, fluency, and comprehension (Aldridge, 2003; Virginia Department of Education, 2004). Reading instruction for monolingual students must contain multiple elements that are acknowledged by the teacher, taught to students, and assessed for future instructional purposes. The Virginia Department of Education aligned the state standards for all subgroups and reported that Limited English Proficient (LEP) students would be taught and assessed in the same way as English-speaking students to ensure an equal education for everyone. The sequence used to teach the five components of language literacy assist English-speaking students in developing reading skills based on their familiarity with English vocabulary words. In discussing each component, the instructional needs of Latino students are addressed with the goal of preparing them to read on their grade level.

Phonological Awareness. Phonological awareness, the first component of language literacy, recognizes "that speech is made up of individual sounds" (Yopp &

Stapleton, 2008, p. 375) and is the "conscious ability to detect and manipulate sounds of the spoken language" (Sodoro, Allinder, & Rankin-Erickson, 2002, p. 223). This component involves students by having them identify the letters of the alphabet followed by their sound correspondence (Betourne & Friel-Patti, 2003; Gunn, Biglan, Smolkowski, & Ary, 2000; Linan-Thompson, Bryant, Dickson, & Kouzekanani, 2005; Nelson, Benner, & Gonzalez, 2005). An effective literacy program teaches phonological awareness and creates an enriching literary environment with instruction for sound-symbol correspondence through direct teaching and the availability of ample children's literature to the students (Stewart, 2004).

Phonological awareness evolves in a five-step series that determines the degree of success the student might achieve with this component of language literacy. Sodoro, Allinder, and Rankin-Erickson (2002) describe five sound structure tasks that are needed to develop phonological awareness. The first level is the knowledge of sounds by participating in nursery rhymes, patterning, and listening to beats of music so that students comprehend rhythm. The ability to compare and contrast sounds by differentiating beginning from ending sounds is the second level. The third level requires students to recognize and produce the sound of each letter of the alphabet. A student who has reached the fourth level can accurately manipulate sounds to produce simple words when they detect or reorder an individual phoneme in a word. By the time a student can reach the fifth level, he or she can hear, segment, and clap out the phonemes of each word. As soon as a level has been taught and proficiency observed, the student advances to the next one until all five have been mastered and phonological awareness is present in daily learning activities.

Phonological awareness is a predictor of future reading achievement (Leafstedt & Gerber, 2005; Lindsey, Manis, & Bailey, 2003) and must be taught to Spanish-speaking students in a way that promotes conversation (Yopp & Stapleton, 2008). Lindsey, Manis, and Bailey suggest writing activities and an ample variety of printed materials in the classroom. McTavish (2007) adds that primary-school students who read catalogs, books, magazines, and flashcards at home are more successful with reading. Without exposure to reading and writing, Latino students might exhibit a lack of phonological awareness. If this occurs, Gunn, Biglan, Smolkowski, and Ary (2000) advise remediation in small groups for more individualized attention. Nelson, Benner, and Gonzalez (2005) recommend individualized drills for skill retention.

Six research studies used a variety of teaching methods with Spanish-speaking children to assess their phonological awareness. Some studies assessed the bilingual students in both of their languages while others offered remediation services to struggling readers. Experimental and control groups were used in some with a range of independent variables to study. All studies offered insight into the first component of language literacy and the specific needs of Latino students.

The first research study, conducted by Branum-Martin et al. (2006) used 812 kindergarten children to verify that bilingual children acquire phonological awareness skills in a sequential order similar to English-speaking children but experience more difficulty with individual phonemes. Students, given the Spanish assessment first and the English version one week later, were assisted by their teacher in comparing and contrasting phonological awareness skills in the two languages. In both languages students sounded out each letter of the alphabet, blended sounds to compose imaginary

words, segmented words into syllables, and deleted letters to form new words. The study

arrived at two conclusions: (a) strong phonological awareness skills in English led to

strong reading skills in the primary grades; and (b) strong phonological awareness skills

in the native language were also strong in English.

A second study, conducted by Leafstedt and Gerber (2005), assessed 90 students

with an average age of 6.5 years by administering a Spanish phonological awareness test

before the English version. Teachers asked the students to produce the sounds of the

alphabet, choose pictures of objects that began with the same sound, recognize rhyming

words, and blend sounds to make simple one-syllable words. This study concluded that

early phonological awareness skills in Spanish were found in English and was a predictor

of better decoding (phonics) skills and reading achievement in a second language. The

study also suggested that phonological awareness is a cognitive skill that must be

developed early, preferably in kindergarten, and aids in the ability to transfer linguistic

knowledge from one language to another.

A relatively short intervention (only four hours over eight days) used a pretest in

Spanish prior to assessing in English but produced the same results as the Spanish

assessments. This third study, led by Linan-Thompson, Bryant, Dickson, and

Kouzekanani (2005), used 128 bilingual kindergarten students. Seventy students were in

the experimental group chosen as "at risk" from the Spanish assessment, and 58 who had

scored on their grade level for phonological awareness were placed in a comparison

group. The experimental group received individual tutoring in letter naming and sounds

and was coached in learning vowel sounds before learning consonants. The study

concluded that blending sounds was the most important component of phonological

awareness; the comparison group outscored the experimental group in listening comprehension, indicating that teaching listening skills must accompany lessons in phonological awareness.

Other studies assessed Latino students in English only. As stated in the "Oral Language" and "Cross Linguistic Transfer" sections, learning to read a second language is more complicated than reading a text. Listening and speaking are vital in learning a second language with sonorants – a sound's loudness - affecting articulation. A fourth study, conducted by Yavas and Core (2001), studied 24 bilingual first graders whose teachers described them as developing normally. The assessment included pronouncing words given to the students orally and deleting final sounds to form new words. They were also instructed to produce sounds of short vowels (four of five vowels in Spanish are long), liquids (vowel sounds affected by "*l*" or "*r*" following it), nasals (*m, n, ng, nt* sounds), and fricatives (*th, v, h* sounds), all of which are silent in the Spanish language. Sonority (degree of opening a sound during articulation) influenced the ability to produce sounds in 75% of the students and placed Latinos at a disadvantage when learning to read English. The study concluded that if phonological awareness is not mastered early, the bilingual students may need speech therapy to learn to produce and distribute sounds orally.

A fifth study, using an intervention by only part of a group, was conducted by Gunn, Biglan, Smolkowski, and Ary (2000). They studied 60 Latino students and 98 English-speaking students in kindergarten through third grades. The students received remediation in small group settings to enhance phonological awareness after an assessment revealed that they were lacking in phonological skills. During this

intervention, Latino students experienced the pronunciation of the 44 sounds of the English language and separated these sounds to make other sounds through repetitive activities. Sound-to-letter correspondence was taught with rate-building exercises used to influence the sound-to-letter accuracy. Not surprisingly, Latinos scored much lower on phonological awareness skills than non-Latinos, but still made progress through remediation services. The study concluded that remediation services and experienced, certified teachers were effective in building phonological awareness skills.

A sixth study, conducted by Lindsey, Manis, and Bailey (2003) compiled research over a two-year period with 249 Latino kindergarteners who were pretested using a phonological awareness screening and post tested at the end of first grade. The researchers determined that phonological awareness was important to the process of reading, but acknowledged other vital variables for bilingual students' reading achievement. The amount of exposure a child had to books, magazines, and newspapers had a huge impact on the oral language necessary for him or her to become a successful reader. After two years of instruction, phonological awareness peaked and ceased to aid the reading process.

All of the studies presented in this section recognized that phonological awareness is an important component in learning to read English. Latino students' unique needs must be acknowledged before the students are introduced to written English. Teachers have no control over a Latino's oral language skills, sound structure differences in English and Spanish, and the amount of exposure to print that a child has had before attending kindergarten, but educators can learn about language differences and design their lessons accordingly.

Phonics. Once Latino students have mastered the alphabet and sound structure of the English language, phonics instruction and simultaneous practice are necessary for them to begin reading. The students at this stage of language literacy blend sounds that were learned during the phonological awareness phase of development to form words. Phonics instruction may pose a less than ideal situation for Spanish-speaking children in terms of vowel sounds, chunking, spelling combinations, closed syllables, and blends because of the differences between the two languages.

The Spanish sound system positively influences reading the English language for some students by making sound connections, but proves awkward for others due to differences in the letters of the alphabet, phonic sounds, and voice inflections between speakers of the two languages. Helman (2004) posits that there is a strict order that educators should follow when presenting alphabet sounds for word formation to Spanish-speaking students. The educator should first assign words where the beginning sounds are one of 12 letter sounds that are identical in both English and Spanish so that Latino students will make a cross-linguistic connection. The sounds of the alphabet letters *b, c, f, k, l, m, n, p, s, t, w,* and *y* (Helman) are learned quickly because of the identical sound structure of the letters in English and Spanish. Using these letters in single-syllable words is best for starting the reading process for Latino students.

After teaching the 12 identical sounds in both languages, mastery of the four letters whose sounds are similar, but not identical, is the next logical step in phonics instruction for Latino students. Helman (2004) states that the letters *d, g, o*, and *x* show some semblance but vary in the voice inflection needed to produce the sounds. These four sounds will take longer to master and are often confused with each other.

Interestingly, 16 letters are identical or similar in English and Spanish, but only one of them is a vowel.

The five vowels in the English language make 10 or more short and long sounds when spoken; the same five vowels make only five sounds in Spanish with the majority being long vowel sounds. The vowels *a, e,* and *o* are taught first; chunking them with one of the 12 beginning sounds that are identical in the two languages will aid the phonic process for Spanish-speaking children (Culatta, Aslett, Fife, & Setzer, 2004; Graves & Alvarado, 2005). Table 1 lists the five vowels and sounds produced in English and Spanish.

Table 1

Vowel Sounds in English and Spanish

Vowel	English Sound	Spanish Sound
A	short and long a	short o
E	short and long e	long a
I	short and long i	long e
O	short and long o	long o
U	short and long u	oo

(Helman, 2004)

Reading requires the use of sound structure correspondence and later the automatic recognition of words so that the reader is not entirely focused on decoding (Gunn, Biglan, Smolkowski, & Ary, 2000). Spelling, which is quite different from reading, uses two different skills when a student is reading and writing simultaneously. With every word containing a vowel, the difficult task of reading and writing English simultaneously is challenging for a person whose native language is not English. Table 2 depicts vowel combinations by primary and elementary school students in the two languages.

Table 2

English and Spanish Vowel Combinations

Vowel	English Short Vowel Combinations	English Long Vowel Combinations	Spanish Vowel Combinations
A	a	a _ e ai ay eigh	a
E	e ea	e _ e ee ea ey	e
I	i	i _ e ie igh y	i
O	o	o _ e oa ow	o
U	a u	u _ e ew oo	u

(Cruise, 2008; Houghton Mifflin, 2004)

Nine alphabet letters produce entirely opposite sounds in English and Spanish and are the most difficult for Latino students to learn in English and retain for future use. Helman (2004) and Cruise (2008) list these sounds, four of which are vowels, as *a, e, i, j, q, r, u, v,* and *z* and state that the sounds will cause a delay in mastering phonics for bilingual students if they are not learned quickly. Helman also considers repeated instruction and additional practice as necessary techniques in phonics education, especially with letters *gu, qu,* and *h* that are silent in the Spanish sound system.

A teacher of Latino students may notice that they have some difficulty not only with vowel sounds in the English language, but also with letters that are frequently confused. Helman (2004) surmises that Spanish-speaking students substitute one letter for another and confuse *f* and *v*, *d* for *th, j,* and *ch, b* and *v*, and *r* and *w*. Spelling is also affected by the differences in the two sound systems as students write down odd combinations of letters.

Helman (2004) explains that most Spanish words end with one of five sounds: *d, l, n, r,* and *s*. This creates difficulty with closed syllables, endings of words, and the nonexistent *s* blends that are prevalent in English. Table 3 catalogs the letter blends in the English language that must be added to the oral language of Latino students and may cause difficulty for them when speaking, reading, and writing.

Table 3

English Consonant Blends Not Found in Spanish

st	sp	sc, sk	sm	sl	sn	sw
tw	qu	scr	spl	spr	str	squ

(Cruise, 2008; Helman, 2004)

Several studies conducted using phonics instruction as the independent variable has documented the results for assisting Latino students in reading English. Konold, Juel, and McKinnon (1999) researched 1,604 students in kindergarten through fourth grades by assessing each grade on incomplete words read, sound blending, oral vocabulary, listening comprehension, memory, and letter-word identification. Their study sought to measure short-term memory skills and the ability to recall words automatically by using processing speed as an assessment. The conclusion was that homogenous grouping of students for phonics instruction was beneficial for the majority of the students, and the group reading below grade level tended to have short-term memory deficits that hindered their ability to read irregular words - words that cannot be sounded out phonetically.

Gest and Gest (2005) examined 17 students in kindergarten, first, and second grades who were receiving tutoring services in phonetic instruction. These students had been identified by their teachers as having behavior issues that kept them from focusing on learning activities in a whole group setting. The tutoring intervention began with a daily 30-minute lesson with 15 minutes spent on the recognition of alphabet letters and their sounds. Remediation included activities to strengthen the auditory, visual, and kinesthetic skills of the students through active learning and manipulation of objects. The last 15 minutes focused on paired book reading that stimulated interest among students and conversations with peers. The posttest results found that steady improvements in phonics were made throughout the year during tutoring sessions in which students spent more time on-task as a result of individualized instruction.

Ryder, Burton, and Silberg (2006) focused on three pedagogical approaches to discover which one was the most beneficial to students who began learning to read before

they had acquired phonics skills. One approach, Cognitive Apprenticeship, guided the students' responses and provided feedback to the students in a way that made learning new material easier. The second, Balanced Reading Instruction, focused on several aspects of literacy in hopes of meeting the needs of every child. The third, Explicit Explanation, gave specific directions and a rationale for the instruction, and explained its importance in the process of reading. Each approach placed students in small, homogenous groups, and gave them ample time to answer questions. Teachers delivered instruction briskly and without delay while offering abundant praise of students' efforts and accuracy. Teachers' attitudes were documented, and the study reported that scripted and regimented phonics lesson plans diminished student motivation and interest in the lessons. Study results indicated that no approach was more effective than the others, but that phonics instruction definitely raised the reading level of all students.

By the end of third grade, students recognize and know 80,000 different words when seen in print (Konold, Juel, & McKinnon, 1999). Due to the numerous tasks needed to become a successful reader, automatically recognizing words, even uncommon ones, requires a student to know and implement the English spelling system. Phonics is an integral part of learning to read, but as prior research suggests, it is vital to master phonemic awareness before continuing to this level of language literacy. With the five components taught in a sequential order for building adequate reading skills, difficulty thus far will likely make the next level of language literacy difficult as well.

Vocabulary. The third component of language literacy, vocabulary, is needed to create meaningful sentence structures that influence all stages of literacy. It is the ability to recognize and understand the meaning of English words when spoken and written and

to use them without much thought process (Ballinger & Deeney, 2006). Latino students first learn to speak a second language before learning to read it (Bialystok, 2002), and this poses challenges for some bilingual children when they move to the United States with no knowledge of English. Primary school children who are only marginally bilingual encounter problems when they speak but do not read English. Many factors, such as social interaction, reading aloud, writing, and academic language versus conversational dialect, determine the extent of bilingualism in these children and their ability to become successful readers.

English vocabulary acquisition for Latinos, best learned through social interactions, occurs when there are many opportunities to converse freely (Aukerman, 2007; Bromley, 2007; Spencer & Guillaume, 2006) and without academic intent (Ajayi, 2005; Mohr & Mohr, 2007). Once students have befriended one another, discussions in small group literature circles encourage communication that is not only social, but also academic, as students experiment with vocabulary with their peers without fear of failure (Vardell, Hadaway, & Young, 2006). Bialystok (2002), however, disagrees with social interaction among students, stating that oral proficiency is only obtained through specialized experiences that enhance linguistic control and academic learning.

Marginally bilingual Latinos build the background knowledge for better understanding of English vocabulary before they acquire comprehension skills in text passage reading (Apthorp, 2006; Bromley, 2007; Manyak & Bauer, 2008; Spencer & Guillaume, 2006). Constructing this knowledge through teacher-induced strategies is best accomplished through the use of visuals, graphic text organizers, drawing, and websites combining activities that necessitate concurrent auditory and visual processing

(Ajayi, 2005; Apthorp; Echevarria, Short, & Powers, 2006; Spencer & Guillaume; Vardell, Hadaway, & Young, 2006). Bromley suggests that when teachers fail to show enthusiasm during vocabulary lessons or when they present too much information at once, students who are already experiencing difficulty grasping English vocabulary make even less progress.

This stage of language literacy proves more difficult for Spanish-speaking children because they absorb a second language in an oral and written form at the same time and rely upon the auditory aspect for comprehension (Mohr & Mohr, 2007); therefore, having the teacher or student read aloud is recommended for complete understanding (Bromley, 2007; Spencer & Guillaume, 2006). Research suggests the following ways in which the teacher may aid a bilingual student in developing vocabulary in a second language: repeated readings (Apthorp, 2006); teaching antonyms, synonyms, prefixes, and suffixes (Ajayi, 2005); making meaningful literature available (Aukerman, 2007; Manyak & Bauer, 2008); and repeating the same vocabulary words throughout all content areas (Spencer & Guillaume, 2006). Other teacher-induced strategies complement literature with writing activities (Echevarria, Short, & Powers, 2006), rephrase and clarify assignment directions, allow additional time for students to answer questions (Mohr & Mohr), and provide dictionaries for students to consult when needed (Ajayi; Bromley).

When instructing Spanish-speaking children, the teacher has very little control of some aspects of their education. Textbook companies create student editions and teachers' manuals of their books based on expected revenues in the most populated states in America. The publics' awareness of the growing population of Spanish-speaking

children in American schools is slowly increasing, and textbook companies are making attempts to provide materials for the unique learning styles of these bilingual students. Primary and elementary school teachers may need to supplement with books that are highly visual to aid in vocabulary development (Ajayi, 2005; Vardell, Hadaway, & Young, 2005). Vardell, Hadaway, and Young also identify types of books that will give students more opportunities to learn English vocabulary; simple, direct, and familiar nonfiction stories accomplish this purpose by creating visual cues.

The responsibility for creating successful readers regardless of race, language, ethnicity, or socioeconomic status (SES) starts in the primary grades. Duncan and Magnuson (2005) studied Hispanic students whose low SES was based on their parents' income, education, family structure, and neighborhood conditions. The vast majority of Hispanic families in this study had more than one hardship that led to low SES. The study revealed that the homes of these children tended to have more pollutants, fewer books and other reading materials, lower quality of child care before kindergarten, large family size in which each child received less individual attention, and harsh discipline. Family income emerged as the most significant factor in determining a child's readiness for kindergarten. The study concluded that in towns and cities where abundant employment opportunities were available, all of the factors in a low SES home improved, and children were better prepared for kindergarten.

Another research study used an ethical, heterogeneous group of 82 preschool children, studied their expressive vocabulary, and compared it to their level of shyness (Coplan & Armer, 2005). Upon interviewing the students' parents and teachers, it was determined that children exhibiting a higher level of shyness told fewer stories about

themselves, expected more individualized attention, and did not participate in group activities with their peers. Shy females were rewarded by their teachers for acting like little ladies while teachers encouraged shy males to be more talkative; this led to inappropriate interactions with their peers and eventually punishment. The results showed no correlation between students' shyness and the extent of their English vocabulary, but there was an obvious correlation between students' self-image and self-worth.

Two research studies assessed instructional strategies in vocabulary development with Spanish-speaking children and concluded that there were specific ways to encourage English vocabulary in bilingual students. Ajayi (2005) studied the language arts framework of a second-grade classroom where books and materials available to the students related to the framework, reflected diverse cultures, and were highly visual to aid in the reading process. Ajayi stated that identical vocabulary instruction, integrated throughout the day in all subject areas, provided the repetition needed for vocabulary enhancement among Latino students. A conceptual framework and a well integrated school curriculum benefitted all students and kept them on track when they changed schools during a school year. Vocabulary development in Latinos diminished, however, when students had teachers who maintained strict control of instructional activities, left little room for improvisation, and created a classroom atmosphere where sharing ideas was unacceptable.

A second research study (Echevarria, Short, & Powers, 2006) observed 346 ELL in grades six, seven, and eight where teachers used a model called Sheltered Instruction Observation Protocol (SIOP) in an effort to emphasize teaching strategies that would

foster student information retention. Echevarria, Short, and Powers described this protocol as one that encouraged teachers to engage students in peer discussions, allowed supplemental material presented to and read by Spanish-speaking students, and integrated writing strategies with reading assignments. Results of a writing assessment used to measure English literacy indicated that there was a definite need to build academic vocabulary for formal writing activities. The study also concluded that Spanish-speaking students needed visuals to accompany reading, and peer interaction was vital for enhanced vocabulary development. The authors of the study believe that it requires at least four or more years of language instruction to become proficient in a second language.

Latinos have a limited English vocabulary and use it less frequently than Spanish. Building vocabulary takes more than exposure to the language and requires different approaches to teaching. Bilingual students' learning styles must be met in order to maximize their learning of vocabulary and other elements of language literacy.

Fluency. The fourth component in language literacy, fluency, is the automatic reading of words without the need to decode. It is also the accurate use of pitch, phrasing, and expression when reading aloud (Begeny & Martens, 2006; Graves, Plasencia-Peinado, Deno, & Johnson, 2005; Kuhn, 2004; Morrow, Kuhn, & Schwanenflugel, 2006; Osbourn, Lehr, & Hiebert, 2003). It should never be assumed that a student who can decode well will read fluently because fluency depends on students' background knowledge of the text's subject. According to Morrow, Kuhn, and Schwanenflugel, fluency strategies should be taught, like every other component in language literacy, as a precursor to reading comprehension. For English-speaking

students, fluency is important for comprehension, but is not as important to ELL (Ramirez & Shapiro, 2006). ELL may still need phonics instruction in third grade; therefore, their fluency will probably be weak.

Begeny and Martens (2006) claim that the focus on fluency usually starts around third grade; assessments using trained passages are the most common way to evaluate this reading skill. Measuring fluency is usually accomplished by recording "words per minute" (WPM) during fluency drills using reading texts read only once by the student (Begeny & Martens; Corn, 2006). This is not enough, according to Osbourn, Lehr, and Hiebert (2003) who believe repeated reading and discussion of a text help struggling readers (Kuhn, 2004; Morrow, Kuhn, & Schwanenflugel, 2006). Comparing bilingual students' fluency in WPM to that of English monolinguals is unfair because students whose native language is Spanish may never become fluent English readers (Ramirez & Shapiro, 2006).

Educators can regulate the fluency of their students by arranging them into homogeneous instructional groupings of up to three children (Begeny & Martens, 2006; Morrow, Kuhn, & Schwanenflugel, 2006), or by placing students with similar interests together and offering immediate feedback when reading (Kuhn, 2004). Morrow, Kuhn, and Schwanenflugel suggest exposing struggling students to grade-level literature and concepts and encouraging partner reading for low fluency students by pairing them with more fluent peers. The more fluent students can practice their fluency while the less fluent children master auditory skills and learn from more proficient classmates.

Four research studies measuring fluency used different assessment tools, but reached the same conclusion: reading fluency is more important with monolingual

readers than with bilinguals reading English as their second language. The first study measured fluency in Spanish-speaking fourth graders by recording WPM in drill activities and documenting phrasing and expressiveness for future comparisons. Fast reading, with expression, was encouraged because previous research with English-speaking students had concluded that the quicker the students read, the more accomplished readers they became. Corn (2006) disagreed and determined that Latinos' fluency was not a predictor of future reading achievement because the faster readers in her study were not the better performers on reading tests. She deduced that decoding skills was more important than fluency in bilingual students, and that fluency tests were unfair assessments for these students.

A second study conducted by Graves, Plascendia-Pienado, Deno, and Johnson (2005) also used drill type activities, but the ELL read nonsense words that followed English orthography instead of passages. The students were pretested at the beginning of their kindergarten year and post tested at the end of their first grade year using fluency assessments. Data collected on these students by Graves, Plascendia-Pienado, Deno, and Johnson exhibited a one word per minute weekly gain and concluded that kindergarten word recognition fluency was not a predictor of future reading achievement in ELL.

A third study, conducted by Ramirez and Shapiro (2006) viewed data collected from 62 Spanish-speaking students thrice yearly on their WPM rate. The students were first tested in their native Spanish and again in English. The researchers found that verbal testing in Spanish was a more positive indicator of English reading skills than were reading assessments in English. Fluency was not found to be an important component in

language literacy for Spanish-speaking students, but ongoing assessments were superior to intermittent ones and a better predictor of oral reading fluency in English.

The fourth study compared oral fluency strategies of bilinguals in two languages to English monolinguals. Rosselli et al. (2002) studied 45 English monolinguals, 18 Spanish monolinguals, and 19 Spanish and English bilingual students. The assessment consisted of using words that represented familiar objects in both languages such as foods, animals, birds, insects, and the parts of speech. Although the results determined that fluency in both languages was similar in the categories of foods and animals, bilinguals had more difficulty and less fluency. Concrete nouns were the most recognizable for bilinguals, and the students were often confused with words that could be a noun, verb, or adjective depending on how it was used in a sentence. The students' life experiences determined their oral fluency of words that were more nature-oriented, such as types of birds and insects. Cueing systems in both languages proved that bilinguals use categorical cues in their native language and letter cues in their second language. The differences in the two languages were attributed to each language employing contrasting cognitive strategies for fluency development.

Reading fluency is an important component of language literacy for English-speaking children. Research suggests that this is not the case for bilingual students whose native language is not English. The studies gave equivalent fluency results that determined reading fluency is not a predictor of future reading achievement of Latinos, universal assessments are unfair to them, and fluency assessments may stigmatize them negatively.

Comprehension. The last component of language literacy, comprehension, is the understanding of a text and its intended meaning (Liang & Dole, 2006). Teachers underestimate the importance of comprehension by placing a great deal of emphasis on phonics (Zimmerman & Brown, 2003) when the goal of reading should be comprehension (Neufeld, 2005). Certainly, decoding difficulties can lead to a weakness in comprehension (Powell-Brown, 2006), but phonetically based reading ends in the primary grades, and comprehension becomes the focus in third grade (Lutz, Guthrie, & Davis, 2006). Spending less time decoding words leaves more time to focus on the content of a text.

Spanish-speaking students may be able to speak grammatically correct English and read proficiently with such confidence that teachers are surprised when the students' reading comprehension is weak (Powell-Brown, 2006). This confidence is superficial because students who have difficulty reading and comprehending texts usually have low motivation due to their past problems with reading, and they tend to give up quickly rather than continue to struggle with reading comprehension (Sideridis, Mouzaki, Simos, & Protopapas, 2006). Motivational indices controlled by the teacher raise self-esteem to create a positive atmosphere that encourages even weak students to read. Powell-Brown recommends the following techniques to engage reluctant readers and improve their comprehension:

1. use high-interest books that children will enjoy

2. use low-vocabulary books

3. assign written projects other than book reports

4. allow students to choose the books they will read

5. incorporate 15 minutes of daily pleasure reading

6. model the passion for reading

7. allow reading to be social

The strategies a teacher uses to improve reading comprehension must encompass the features of language literacy (Cartwright, 2006). Taking notes and verbalizing thoughts while reading, using graphic organizers to recognize relationships between the text and reader's ideas, and asking questions are ways that Fiene and McMahon (2007) suggest to improve comprehension. Neufeld (2005) agrees and adds "before reading" strategies such as discussing the importance of reading, previewing the text, activating background knowledge, and making predictions to enhance comprehension. Liang and Dole (2006) state that as soon as a teacher instructs the students to use certain comprehension strategies, the students can automatically predict, summarize, ask questions, and clarify texts on their own. Sipe and McGuire (2006) posit that some children naturally resist literature, and teachers should incorporate writing activities into the reading process to make it a personal experience for the students. All strategies have a significant impact on comprehending texts and can only help, even minimally, the Latino child.

Several studies of bilingual students compared their reading comprehension skills to those of English-speaking children. The first, conducted by Ransdell, Barbier, and Niit (2006), researched working memory and suggested that memory has a huge impact on reading comprehension with bilingual students. These students have a better awareness of phonemic awareness due to their familiarity with multiple sound systems. Working memory increased active information processing and rapid recall of information. The

researchers cited simultaneous speaking, reading, and writing as ways to activate language codes that stimulate working memory, add to the long-term memory, and increase reading comprehension.

Another study of 66 third-grade students revealed comparable qualities between ELL and English-speaking students. Hamilton and Shinn (2003) discovered that both groups had lower comprehension scores when phonics skills were weak because they spent so much of their time decoding. Some teachers even predicted that their ELL were very competent, fluent readers and would score highly on comprehension assessments. When asked to read aloud, these students mispronounced more words and had a much lower comprehension rate of the texts than the teachers expected. Both the ELL and English-speaking students, who were considered "word callers" and had poor comprehension skills, had teachers who scored them significantly higher in comprehension than their actual achievement tests reported.

Kim et al. (2006) used computer-assisted comprehension activities to assist 26 Latino learning-disabled students in developing comprehension skills. Lessons included explicit instruction on developing their meta-cognitive awareness, describing already known facts about the subject, learning strategies to comprehend unknown words, and asking questions to review the key ideas. Decoding words proved a major weakness for all of the students before and after the intervention, but their reading comprehension improved by using this program. The authors stated that computer-assisted instruction had specific procedures to follow for optimal growth in reading comprehension. Pretesting the students, properly training the teachers, collaborating with teachers, and

post testing all participants were recommended to ensure that the computer program was being used to strengthen the Latino students' reading comprehension.

All five components of language literacy have a pivotal role in the reading process. For students whose second language is English, these components are important, but each student must be taught in a way that is conducive to his or her individual learning style. This chapter has described these components to identify the difficulties that Latino students may experience because of the language barrier. *Reading A-Z*, the intervention in this research study, incorporates many texts that emphasize students' interests and offer many reading levels for specific instructional needs.

Writing

For most ELL, learning to read English is not the only challenge. Writing the second language presents its own set of instructional circumstances. Research on Latinos affirms that reading and writing simultaneously create an active process that the students can enjoy while reinforcing their background knowledge of content area subjects.

Latinos learn to speak English through conversation but use it quite frequently in formal writing assignments. Sluys and Laman (2006) argue that conversational writing for ELL is acceptable for optimal reading and writing growth in a second language because it helps them organize ideas. A conversational tone of writing allows students to play with the language and make mistakes, learn from those mistakes, and make corrections when necessary. Sluys and Laman believe that writing supports the reading process when students are allowed to use an informal tone in their writings, allowed to make errors, and use personal experiences and note taking to connect their background knowledge to their creative writings.

Two research studies explored the writing of ELL and their attempts to meet the expectations of grade-level performance. Saunders and Goldenberg (1999) studied the use of instructional conversation and literature logs with 116 fourth- and fifth-grade students, half of whom were Spanish-speaking. The literature logs integrated reading, writing, and discussion by blending existing knowledge with new information to create ideas that would become more detailed over time. The study compared the effects of both instructional conversations and literature logs of students who were fluent in English to those whose native language was Spanish. The results of the study confirmed that the use of both variables improved comprehension for Spanish-speaking children more than it did for the English-speaking. Instructional conversation seemed to have a more positive influence on reading skills for ELL than the literature logs when the variables were taught separately; however, there was no difference for English-only students.

Manis, Lindsey, and Bailey (2004) concluded that writing was an essential element in learning to read a second language. A group of 303 Latino kindergarteners was assessed and monitored; the results verified that those who did not incorporate writing with reading had weaker English-speaking oral language and reading skills over time. Reading comprehension was not affected in the primary grades by the lack of writing activities, but many of these students were not prepared for a first-grade writing curriculum. Writing and the amount of exposure to printed materials were definite predictors in enhancing English reading skills in Spanish-speaking children.

A program using writing to support all curriculum areas, *Writing to Learn*, does not focus on the processes of writing: prewriting, writing, reviewing, revising, editing, and drafting. It gives students the opportunity to use their background knowledge and

promotes questioning in a particular content area (Knipper & Duggan, 2006). *Writing to Learn* optimizes absorption of content area subject information which improves reading skills, keeps students active in the reading and writing process, and builds reading comprehension (Gammill, 2006). Latino students have a difficult time with formal English activities and will take ownership of learning a second language when there are limited academic grading processes.

Moore-Hart (2005) organized a summer writers' camp that incorporated the processes of writing with a more journalistic approach to note taking, listening, observing, and interviewing for sharpening and strengthening writing skills. The children engaged in activities, described facts learned from interviews, and arrived at a better understanding of the writing assignment. The camp applied the scientific methods of observing a phenomenon, formulating hypotheses, and communicating the results. Because there was a purpose for writing, revising and editing became skills that were easy to learn because the students practiced their writing each day.

The research literature suggests that the myriad ways of writing are conducive to the improvement of reading skills for optimal learning in ELL. Journal writing enhances other components of language literacy from the elementary grades through high school (Kamii & Manning, 2002). Meltzer and Hamann (2006) monitored high school students and discovered that modeling by the teacher and actively engaging the students in the writing process produced ELL whose reading and writing were equivalent to that of monolingual students. Meltzer, along with Mason, Snyder, Sukram, and Kedem (2006), stated that instruction presented before, during, and after the writing assignment assisted

the students in positive ways. In addition, making the writing relevant to the students'

lives helped them improve reading skills through the writing process.

Forging connections using artifacts from the past integrates subject areas with

writing to promote better understanding of the content being studied. A safe learning

environment where risk taking is encouraged, reading is integrated with writing, where

adults and the students enjoy stimulating conversation and conduct historical research on

the Internet, produces curious writers who are literate in the social sciences (Fuhler,

Farris, & Nelson, 2006). Studying and learning about ancient artifacts through books,

pictures, and the Internet create motivated and inquisitive readers and writers who

understand that yesterday affects today and today influences tomorrow.

ELL seem to develop reading skills more quickly when assignments contain both

reading and supportive writing activities. *Reading A-Z* provides writing activities for

each lesson for the teacher's convenience and lesson plans detailing the writing

assignments to be incorporated into the daily tutoring sessions.

Instructional Reading Level

The level at which students profit from classroom instruction is their instructional

reading level (Invernizzi, Juel, & Meier, 2006). A first-grade teacher typically instructs

the class and uses materials written on a first-grade level; a second grade teacher instructs

using second grade reading material. It may be difficult to know each student's

instructional reading level; this is the value of preassessments. Once this information is

known, classroom teachers may differentiate their lessons to accommodate all learners

and provide instruction that improves the instructional reading level of every student.

Each grade level has general guidelines that teachers use to instruct the students. Houghton Mifflin (2004) indicates that skills taught in kindergarten contain predictability and repetition of sounds and numbers while first grade lessons incorporate simple ideas and dialogue repetition. Familiarity of material with a gradual increase in difficulty of words and sentence structure is used in stories written for a second-grade reading level. The instructional reading level of students is detrimental to their learning process because teachers cannot assume that the students' grade level is also their instructional level.

To improve language literacy in students, Ediger (2002) notes that each grade has instructional levels that incorporate appropriate vocabulary and spelling patterns, illustrations, and the use of imagery to make reading for meaning important. Ediger also states that stories read in class should be offered at three levels that contain the same subject matter, meaning, and illustrations, but are readable for students of below-level, on-level, and above-level abilities. With all students reading at their own level, optimal learning takes place by using challenging, non-frustrating tasks (Treptow, Burns, & McComas, 2007). Expecting an entire classroom of students to benefit from a single story does little to ensure the reading progress of the majority of students (Roe, 2004).

Federal guidelines dictate that every state in America must have students reading on their grade level by the end of third grade (United State Department of Education, 2008). Some school systems administer preassessments to determine the instructional reading level of all students and hire paraprofessionals to offer remediation to those that need it. Quite often, supplemental reading materials that help students advance without frustration are needed (Ediger, 2003).

Ongoing assessments provide vital information to assist educators in identifying students' instructional reading levels and provide reading materials that will enhance reading skills. Students learn best when their teachers know what their instructional reading levels are and provide them with appropriate reading materials. *Reading A-Z* offers stories based on every instructional level from kindergarten to sixth grade with teachers choosing passages based on each student's level.

Word Recognition in Isolation

The five components of language literacy build upon one another to cultivate students' reading skills. Comprehension, the ability to glean meaning from printed text, depends on the automatic recognition of English vocabulary words in isolation (Invernizzi, Juel, & Meier, 2006; McIntosh, Graves, & Gersten, 2007). Accurately recalling words without having to decode them will enhance fluency and obviate phonics reading (Kuhn, 2004). Although some words have multiple meanings that can only be distinguished using context clues, recognizing words in isolation speeds the process of reading and is a predictor of future success in on-grade level passage reading.

Because some English words cannot be simply "sounded out" due to their unique spellings, word recognition in isolation is vital in developing reading skills in ELL. Improving basic reading skills requires the educator to repeat words for automatic recognition in mastering English vocabulary (Tam, Heward, & Heng, 2006). As noted in previous research, ELL sometimes rely too heavily upon using context clues in texts when decoding skills are necessary in reading English for Spanish-speaking students, as well as automatic recalling of basic vocabulary (Valencia & Buly, 2004). Students must

find the exact balance of phonics and word recall to enable ELL to read a second language.

An effective tutoring program offers immediate feedback on incorrect answers from the tutor during the reading intervention process. When students read words in isolation from flashcards or other materials, but not formally assessed, teacher feedback should be addressed and explained for optimal learning. If, however, a student misreads a word in a passage, Tam, Heward, and Heng (2006) suggest ignoring miscues unless it changes the text's meaning as this allows the student to self-correct as the tutor monitors the student's comprehension. Ideally, the words read in isolation would mirror the vocabulary recognized in passage texts, but this is not always the case depending on the need to use context clues for understanding.

Assessments for word recognition in isolation are usually adaptive and range from preprimer - beginning of first grade - through sixth grade and administered individually in an untimed procedure. Invernizzi, Juel, and Meier (2005) suggest that students read words in isolation by grade level until fewer than 75% of the words in isolation have been correctly identified. Multiple pronunciations are accepted when reading words in isolation, and self-corrections are verified as accurate. Assessing words recognized in isolation gives educators an indication of whether students need additional instruction with high-frequency words and on which level to provide text reading for the students.

Remediation

Students showing difficulty with reading in the classroom setting or from a preassessment may require remediation services offered as additional instruction time, usually in small groups. Sometimes remediation is referred to as "tutoring",

"intervention", or "supplemental instruction" depending on the author's choice in writing, and are used interchangeably. Remediation strives to assist all students in overcoming their weaknesses, raising their instructional reading level and their ability to recognize words recognized in isolation (consistent with their grade level).

Students who are having difficulty reading in the primary grades will most likely continue to read below their grade level as they grow older. Students who have difficulty retaining information and who require tutoring services may not be motivated to learn or might not enjoy a particular subject (Edmunds & Bauserman, 2006). Students may enter kindergarten eager to make new friends, but quickly become disenchanted with reading and academic subjects. Edmunds and Bauserman believe that struggling readers have an awareness of others' abilities and self comparison is undeniable. Emphasizing competitive reading activities causes stress and decreases students' motivation to learn and enjoy the school climate. Edmunds and Bauserman recommend motivating students who are experiencing reading difficulties by:

1. selecting age-appropriate books for classroom libraries

2. selecting interesting books for classroom libraries

3. allowing students to choose their own recreational reading

4. allowing students to read with a partner

5. having the teacher model excitement about reading

For many students, a lack of interest in reading may stem from a combination of academic difficulties that manifest as socially unacceptable behavior. Two separate research studies found that students in the primary grades who were having difficulty decoding had attention and focusing problems that made classroom instructional time less

about reading and more about discipline. Gunn, Smolkowski, Biglan, Black, and Blair (2005) studied 299 Hispanic and non-Hispanic children and discovered that individual oral language was not a factor in the effectiveness of tutoring because those who received remediation made more gains in reading than those who did not. Another study (Gest & Gest, 2005) of students with behavioral issues revealed that tutoring sessions often eliminated attention and behavioral difficulties because the students felt more academically comparable to others after tutoring. In both studies, negative behavior reduced time-on-task and was eradicated through regular tutoring services in small group settings.

The benefits of tutoring are well documented, but students must be pre-assessed to determine their instructional reading level (Cole, 2006). Once this has been established, the number of days and the amount of time for tutoring must be based on individual schedules. Saenz, Fuchs, and Fuchs (2005) studied 132 Spanish-speaking students in grades three through six who received tutoring three times a week for 35 minutes. This time was used to incorporate peer-assisted reading, recall events, summarize ideas, and receive corrective feedback. Gunn, Smolkowski, Biglan, and Black (2002) monitored primary school students who were being tutored in word attack skills and reading fluency and compared them to a control group of students who received no tutoring services. In both studies, students receiving tutoring made more gains in reading than those who did not.

Tutoring presents sometimes unforeseen challenges that educators might oppose. The demands of the Spanish language may be unfamiliar to even the most professionally trained staff (Vaughn, Mathes, Linan-Thompson, & Francis, 2005). This prevents ELL

from receiving the primary educational needs they require for English language literacy. The authors also suggest that ELL may be misdiagnosed due to the educator's lack of knowledge about the Spanish language, the use of IQ tests to identify learning disabilities, lack of qualified staff to monitor and provide intervention, and English-only assessments. Linan-Thompson, Bryant, Dickson, and Kouzekanani (2005) concur that unfortunate situations exist, but cite their own research when stating that providing Spanish literacy instruction during the tutoring sessions of kindergarten ELL students demonstrated no gains in reading achievement when compared to a control group that received whole group instruction in the classroom. Still, other researchers believe the challenge with tutoring ELL students is the failure to give them additional training on their individual instructional reading level instead of attempting to help them "catch up" on grade level material that is being taught in the classroom.

Differentiated Instruction

Students differ both in their physical characteristics and in their cognitive abilities. Gregory and Chapman (2002) define differentiated instruction as

a philosophy that enables teachers to plan strategically in order to

reach the needs of the diverse learners in classrooms today to achieve

targeted standards. Differentiation … is a philosophy that a teacher

embraces to reach the unique needs of every learner. (p. x)

A teacher who differentiates starts the instructional process where the students are achieving and offers appropriate options for literacy learning success. Quite often, the tutors work with student groups of less than five outside the regular classroom. With

ELL, the remediation is an effort to raise the instructional reading level to match grade level instruction.

Research studies involving differentiated tutoring based on the students' needs has revealed that although all students were pre-assessed to determine their individual instructional reading levels, lessons and materials varied. Another similarity in the studies was that small, homogeneous groupings were used so the teacher could focus on one skill at a time. Edmunds and Bauserman's study (2006) provided multiple leveled books to homogeneous groups and allowed the students to choose the story based on their interests. This brought an increase in the number of books that the students read. Every child chose a different book and discussed it with others in the group. When asked to share narrative text to the reading group, 84% preferred the books they had personally chosen to those that had been assigned to them by a teacher.

Otaiba (2005) monitored a study of ELL who were tutored only twice weekly, but the lessons were based on their instructional reading levels from a preassessment. Tutors used differentiated materials based on students' needs, sat in close proximity to the students, orally reflected on the lessons, and kept the students on-task during tutoring sessions. The results of the study revealed that six of the eight students were on-grade level with their English-speaking peers by the end of the 15-week tutoring session. The other two students were siblings who missed one-third of the sessions and made no progress.

Reading lessons should concentrate on content area reading and vocabulary. Santoro, Jitendra, Starosta, and Sacks (2006) focused on these two skills in their study of four second graders, using a program that emphasized "English decoding along with

practice of reading skills in decodable, connected text" (p. 105). Other students in the control group reread classroom texts and made progress in reading fluency while the treatment group receiving differentiated instruction made more progress in decoding, word reading, and understanding vocabulary. The researchers credited differentiated instruction for the improvement in the reading skills of the ELL students in supplemental reading groups.

Teacher quality was the independent variable in a study conducted by Gersten, Baker, Haager, and Graves (2005) of first-grade ELL students who were reading below grade level. The students on-grade level at the end of the year had teachers who kept the students actively involved in reading, incorporated writing into the reading lessons, taught new vocabulary words before reading instruction began, and knew when to stop reading by focusing on students' actions. The researchers recognized the significance of differentiated instruction for low performers and the teacher's willingness to instruct in this manner, but believed that teacher qualifications had an impact on student successes.

Research indicates that Spanish-speaking children have specific needs in their quest for on-grade level reading achievement. Most likely these children will be at-risk in their first year of school; thus, additional instruction through classroom lessons or from remediation services may be necessary. Differentiating their instruction is an ideal way to bring ELL to grade-level performance. Starting instruction at the level they already know and then moving forward in reading are productive ways for them to attain literacy.

Reading A-Z, the independent variable in this study, provides reading material on a multitude of reading levels and allows for differentiated instruction. The reading passages of this online program complement a Spanish-speaking student's learning style

by offering leveled reading books, writing activities, and nonfiction passages. The

remediation services using *Reading A-Z* given to each Latino student in this study

allowed for oral reading and differentiated instruction to occur. This study intended to

use a program that would incorporate the areas of instruction that were necessary for

Spanish-speaking students according to the literature research.

Chapter III

Methodology

Quantitative research attempts to translate perceptive notions into a design that can be explained to and understood by others (Chapman, 2002). The conclusions contain useful information that benefits educators' approaches to teaching and to students' learning. Educational research gives a voice to the experiences of the participants and elicits the data for future implementation of curricula or interventions used by students (Poggenpoel & Myburgh, 2005; Stein & Mankowski, 2004).

The purpose of this study was to examine the efficacy of *Reading A-Z*, an online leveled reading program, on primary and elementary grade Latino students' instructional reading level as measured by the Phonological Awareness Literacy Screening (PALS) assessment. Ten elementary schools participated in this study, and the researcher analyzed student achievement data related to the implementation of *Reading A-Z* in these schools in which students received remediation services. This chapter describes the methodology used for a comparison of achievement in students who received *Reading A-Z* to those that did not based on a pre- and post assessment of achievement results. Chapter three describes the research design, research subjects, instrumentation, procedures in collecting data, data analysis, and a summary.

Research Design

This research study was a quantitative, quasi-experimental design comparing a control group to a treatment group. The researcher used a convenience sample in a pre-existing educational setting of Latino students already receiving tutoring in school. The

subjects and the tutors worked together for two months prior to the intervention and were already comfortable with each other. A poor rapport is a major obstacle that several research studies have already noted (Poggenpoel & Myburgh, 2005), but personality conflicts were not reported in this study.

Students in the control group received remediation services that consisted of word sorts, flashcards using high-frequency words, spelling tests, word families, Standard of Learning (SOL) reviews in language arts, timed reading passages for fluency, and leveled *Ready Readers* from the school system's adopted reading series. Some of the other tutoring services were determined by the classroom teachers when instructing the tutors to assist the students in completing class work or the previous night's homework. Two schools, attended by five of the students in this study, had been designated as *Reading First* schools and were required by the Virginia Department of Education to use the *Open Court* series for their classroom and tutoring services. For confidentiality purposes, students in the group were given numbers C 1 – C 23.

The treatment group was instructed using predominantly *Reading A-Z* with other lessons chosen by the classroom teachers based on an SOL that they did not think the student was mastering. This group was also referred to numerically as T 1 – T 23 with only the researcher knowing the identity of each student in the research study.

The research study involved pretesting each first-, second-, and third-grade Latino student in the study to determine his or her Instructional Reading Level (IRL) and Word Recognition in Isolation (WRI) level. Students in both the control and treatment groups received a 30 minute in-school tutoring lesson each day outside of the regular education classroom. No student in the study received tutoring all 79 days in the documented time

period. Some of the reasons given by the tutors for a lack of tutoring on specific days

included weather-related school cancellations or two-hour delays. Other reasons cited for

cancelled tutoring sessions were tutor absence, student absence, school assemblies, fire

drills, state standardized testing, ELL standardized testing, field trips, and in one school, a

power failure. At the end of the 18 weeks of remediation services, all students were

individually post tested to measure their IRL and WRI levels.

The researcher used a paired sample *t*-test to analyze the data from pre- and post

assessments to determine if the treatment group made more progress in their instructional

reading levels than did the control group.   The paired sample *t*-test was used to test the

difference in pre- and posttest scores of students receiving *Reading A-Z* to those who

received an alternative form of tutoring services. This test measured the improvement in

scores during a school year after daily intervention. The data from the assessments will

determine which tutoring services made a statistically significant difference in the IRL

and WRI of Latino students over an 18-week period.

Research Subjects

The research subjects consisted of 46 Latino students in first, second, and third

grades who attended 10 southwestern Virginia elementary schools. Ninety-eight percent

of the subjects received free or reduced lunch. All of the parents migrated to the United

States from Mexico and the children spoke Spanish in the home. These subjects received

remediation services based on a preassessment that placed them at-risk for reading failure

or the classroom teacher's recommendation based on performance on reading

assignments. The data related to gender and grade level are as follows:

Table 4

Research Subjects

Grade	Males	Females	Total Number By Grade
1	6	13	19
2	6	6	12
3	9	6	15

Among these students, retention was an issue; five first graders, four second graders, and three third graders had been previously retained. At the time of the posttest, the average age of the first grade subjects was seven years and seven months, second grade subjects' average age was eight years and five months, and the third grade subjects were an average age of nine years and five months old.

The selection process began with a Parental Consent Form (Appendices B and C) that was sent to all 128 Latino students representing 11 elementary schools in first, second, and third grades in a single school district. The teachers and principals received the English version while the parents received the Spanish copy. This decision was made by a representative from the school system's Central Office to eliminate having to explain to Spanish-speaking parents why only a certain group of students had been selected to participate in this study. Seventy-four parents returned the Parental Consent Forms; 47 were eligible for this research study due to their below-grade level IRL scores on the PALS preassessment, or teacher recommendation, which qualified them for in-school remediation services. One Latino student moved to Mexico during the study, decreasing the sample size to 46 due to no post assessment available for comparison.

Parents of the other 27 subjects received a letter indicating that their children would not

be in the research study due to their on-grade level reading performance (Appendices D

and E).

The research subjects were assigned to remediation groups of two or less and

monitored for 18 weeks. The reading specialists and tutors chose the type of remediation

lessons that would be taught, but had access to *Reading A-Z* and attended a workshop

presented by the researcher in the proper use of this curriculum. Twenty-three were

tutored using *Reading A-Z* while the other 23 were tutored using other curricula or

materials created by classroom teachers.

Instrumentation

Phonological Awareness Literacy Screening (PALS) assessment, a series of tasks

for grades one through three designed to measure the knowledge of important literary

fundamentals in primary aged students, was the assessment tool used for this study

(Invernizzi, Juel, & Meier, 2006). PALS consists of Spelling, Word Recognition in

Isolation, and Oral Reading in Context that offers grade-level performance measures for

every student. The Entry Level Summed Score, the sum of the first two subtasks, offers a

base score used to determine those identified by PALS who need additional services in

reading.

The Spelling portion is administered to the whole class while the other two are

administered individually. The Word Recognition in Isolation (WRI) starts at the

Preprimer level (PP) and continues through sixth grade with each student reading words

from a list until he or she reads 15 or more correctly. This assists the test administrator in

selecting an Oral Reading in Context (ORC) passage for each student. The levels used by

PALS (Invernizzi, Juel, & Meir, 2005) for WRI and ORC with the grade levels given a

numerical value by the researcher reflecting the grade and month of the school year are

listed below:

Table 5

WRI and ORC Levels

PALS Level	Level of Reading
Readiness (R)	Kindergarten (0.5)
Preprimer (PP)	Beginning of First Grade (1.2)
Primer (P)	Middle of First Grade (1.5)
First Grade (1)	End of First Grade (1.9)
Second Grade (2)	End of Second Grade (2.9)
Third Grade (3)	End of Third Grade (3.9)
Fourth Grade (4)	End of Fourth Grade(4.9)
Fifth Grade (5)	End of Fifth Grade (5.9)
Sixth Grade (6)	End of Sixth Grade (6.9)

Passage reading for ORC, as used by PALS, begins with the test administrator

reading Teacher Prompts for the corresponding passages. These prompts direct the test

administrator to read the title of the passage and ask questions that build background

knowledge before reading the passage. Certain vocabulary words in the passages are

directed in the Teacher Prompts for discussion and assistance in the reading process.

After building background knowledge, the test administrator begins timing the

student as he or she reads the passage. As the student reads aloud, the administrator

keeps track by marking substitutions, insertions, and omissions as incorrect. After a five-

second delay by the student, the administrator notes the unknown words in the ORC and

documents them as incorrect. The administrator asks six questions after the student

completes the passage reading and measures comprehension with four of six correct

answers considered passing. The reading rate is then calculated using WPM to determine

fluency. This information gives a reading level for the student with the following levels,

provided by PALS (Invernizzi, Juel, & Meier, 2006), used by classroom teachers to

determine the instructional reading level of each student:

Table 6

Functional Reading Levels

Frustration Level	Less than 90% accuracy in an oral reading passage
Instruction Level	90% - 97% accuracy in an oral reading passage
Independent Level	98% or greater accuracy in an oral reading passage

PALS is a reliable assessment instrument used since 1998 and is available to all

school systems in the United States. According to the PALS Technical Reference

(Invernizzi, Juel, & Meier, 2006), internal consistencies were determined for subtask,

inter-rater, and test-retest tasks using Cronbach's alphas over a two-year period. Subtask

reliability coefficients "are acceptable with a mean alpha coefficient of .80 and a median

coefficient of .81" (p. 34). Inter-rater reliability coefficients are higher "ranging from .98

to .99 over the past six years" (p.37) indicating the tasks are accurate and reliable. Test-

retest reliability "examined the stability of PALS scores that ranged from .88 to .97 over

a brief period of time" (p.37).

PALS is also a valid assessment instrument using statewide PALS data. It had

three types of validity measured during a six-year period as Invernizzi, Juel, and Meier

(2006) explain in the PALS Technical Reference. The prevalence of content validity in WRI and ORC is evident as educators assess different aspects of reading by "calculating the proportion of words read accurately in a passage" (p.39). WRI has a unitary factor of .89 to .94, "accounting for 79% to 85% of the variance of the Summed Scores for grades one through three" (p.41-42) with medium high (.60-.79) to high intercorrelations (>.80) for grades one, two, and three to determine construct validity. Criterion-related validity for PALS was determined by comparing the reading scores of PALS to the *Stanford 9 Achievement Test* and the Virginia Standards of Learning reading tests. Bivariate correlations were medium high (.60-.79) for the *Stanford-9* in grades one and two. The Virginia Standards of Learning tests, which start in third grade, were used for predictive validity in grade three with a bivariate correlation of .60.

Procedures in Collecting Data

To conduct this research, the researcher followed procedures that entailed careful planning before data collection. First, the researcher contacted the Superintendent of the school system to ask for permission to conduct the study. The Superintendent of Instruction gave permission for the research to occur in the 11 primary and elementary schools. Secondly, the Director of English as a Second Language (ESL) provided the researcher with the names of 128 students of Latino descent in first, second, and third grades. There were more ESL children in this school division, but the researcher focused her literature review on Latinos only. Thirdly, the researcher collected Parental Consent Forms (Appendices B and C) from parents in 10 of the schools. She then contacted the reading specialists to determine which students had made below grade level scores in WRI or ORC and were receiving remediation services. Fourthly, a convenience sample

was chosen based on those students who were already receiving in-school remediation. The students were documented and discussed with all reading specialists who had been assigned to monitor the tutors. Lastly, all reading specialists and tutors signed Confidentiality Statements (Appendix F) to ensure the privacy of every student in the research. The research preparation took place from October to December 2007 with data documentation starting in January 2008.

Depending upon student enrollment numbers, each elementary school had between three and six tutors who were under the direction of a reading specialist. The tutors delivered the remediation services, and monthly meetings with the researcher included the tutors and reading specialists. In January 2008, the researcher met with all tutors and specialists and provided a three-hour workshop based on over 100 research articles that described the characteristics of Latinos and ways to raise their instructional reading levels. *Reading A-Z* was available to everyone employed by this school system, and many tutors were already familiar with it. To extend the workshop, the researcher explained how to use *Reading A-Z* and the positive aspects with its program plan.

Each tutor received a notebook for every student in the research group in order to organize and supply data to the researcher. The tutors and reading specialists chose the type of remediation offered to each student based on their background knowledge of the students whom they had already tutored for two months. Daily remediation sessions were recorded in the student notebooks to identify recipients of *Reading A-Z* (the treatment group), and recipients of alternative sources (the control group).

In May 2008, the schools' reading specialists administered the PALS posttest to all research subjects. The PALS results from fall 2007 and spring 2008 were sent to the

researcher, along with the notebooks, for data analysis. The parents received the reports of their child's progress (Appendix G – English for teachers and tutors; Appendix H – Spanish copy sent to parents), as stated in the Consent Form, after 18 weeks of intervention.

Data Analysis

The researcher documented all pre- and posttest scores and checked the results a second time to ensure accuracy of data. All scores were recorded in a "grade.month" manner with .1 being the first month of a school year and .9 the ninth or last month of a particular school year. The whole number before the numeral representing the month of the school year indicates the grade level; therefore, a score of 1.5 attests that a student's reading level is equivalent to the fifth month of first grade. The researcher then input all data into a spreadsheet according to IRL (Appendices I and J) and WRI (Appendices K and L) by placing information in an EXCEL program to aid in the statistical analysis that gathered the mean, standard deviation, and level of significance for both the control and treatment groups.

The researcher used SPSS 14.0 to compare the pretest scores of the control and treatment groups and the posttest scores of both groups using an independent *t*-test to determine if there was a difference in the students prior to and after the intervention. The scores were calculated to determine the next statistical step that would then measure the improvement from pretest to posttest of each group of students. The researcher compared these scores with anticipated gains over the 18 weeks of intervention using a paired sample *t*-test.

Chapter four explains the results and analyses of these comparisons in the form of narrative text and tables. The researcher also explains the statistical tests and procedures used for the comparison of the control and treatment groups in this research study.

Summary

This chapter examined the methods used in this quantitative study to answer the two research questions posed in chapter one about the impact of *Reading A-Z* on instructional reading levels and words recognized in isolation. The next chapter presents the results.

Chapter IV

Results

This chapter presents the findings from a study that investigated the efficacy of *Reading A-Z* on the reading achievement of Latino students in grades one through three. The researcher's purpose was to compare remediation services offered to low-performing, Spanish-speaking children and to determine if the treatment group who received *Reading A-Z* made more improvement in reading than the control group who received normal and accepted sources of remediation. This chapter answers the two research questions posed in chapter one. The first analysis tested the null hypothesis that there was no difference in the instructional reading level of students receiving *Reading A-Z* and those that did not. The second analysis tested the null hypothesis that there was no difference in the words recognized in isolation of students receiving *Reading A-Z* and those that did not. An analysis of the changes in the pretest and posttest score comparisons is described before summarizing if any significant increases exist in the hypotheses tested.

Quasi-Experimental Comparison of Pretest Scores (IRL)

The first null hypothesis stated that there would be no significant difference in instructional reading levels (IRL) as measured by Phonological Awareness Literacy Screening for low-performing, Spanish-speaking students who received *Reading A-Z* and those that received normal and accepted sources of remediation. The statistical analysis of this hypothesis began with an independent *t*-test to compare the pretest scores of IRL for both groups. This initial test established that although the mean scores of the

treatment group (M = 2.14, SD = 1.26) were higher than the control group (M = 1.97, SD

= 1.21), there was no statistically significant difference between the two groups (t $_{(44)}$ =

- 0.45, p = 0.65) as indicated in Table 7. If there had been a difference in pretest scores

between the two groups, then the students would not be starting from the same baseline;

therefore, there would be a need to include the differences as covariance in the analysis

using ANCOVA

Research Question 1

The IRL posttest scores of the treatment and control groups were compared using

independent *t*-test statistics to determine if significant differences occurred between the

two groups after implementing the intervention. The results indicated that the IRL

posttest scores for the treatment group (M = 3.04, SD = 1.31) and that of the control

group (M = 2.96, SD = 1.37) were not significantly different (t $_{(44)}$ = - 0.22, p = 0.827) as

indicated in Table 8.

To measure the impact of the interventions in each of the treatment and control

groups, the IRL scores taken in fall 2007 (pretest) were compared to IRL scores taken in

spring 2008 (posttest) using paired sample *t*-test statistics. The analysis showed a

significant increase in the instructional reading level for both the control group (t $_{(22)}$ =

5.061, p < 0.001) and the treatment group (t $_{(22)}$ = 5.46, p < 0.001).   It can therefore be

concluded that although there was no significant difference between the posttest scores of

both groups, the interventions in each group produced a significant increase in the IRL of

the students. *Reading A-Z* produced an increase in IRL as did the normal and accepted

sources of remediation in the control group as indicated in Table 9; however, when the

two groups were compared, the effects of the intervention in each group were not large

enough to show a significant difference in IRL scores between both groups after the intervention. This suggests that the increase in scores using *Reading A-Z* was no greater than the normal and accepted sources of remediation.

Table 7

Comparison of IRL Pretest Scores

Group	Mean	SD	df	t	Significance - p
Control	1.97	1.21			
			44	-0.45	0.650
Treatment	2.14	1.26			

* Significance at $p < 0.05$

Table 8

Comparison of IRL Posttest Scores

Group	Mean	SD	df	t	Significance - p
Control	2.96	1.37			
			44	-0.22	0.827
Treatment	3.04	1.31			

* Significance at $p < 0.05$

Table 9

Pretest and Posttest Comparison Scores Between Groups

Group	Scores	M	T	df	Significance - p
Control	IRL	0.982	5.061	22	0.000*
	WRI	1.073	4.782	22	0.000*
Treatment	IRL	0.904	5.466	22	0.000*
	WRI	0.843	5.011	22	0.000*

* Significance at $p < 0.05$

Quasi-Experimental Comparison of Pretest Scores (WRI)

The second null hypothesis stated that there would be no significant difference in word recognition in isolation (WRI), as measured by PALS for low-performing, Spanish-speaking students who received *Reading A-Z* and those that received normal and accepted sources of remediation. The statistical analysis of this hypothesis began with an independent *t*-test to compare the pretest scores of WRI for both groups. This initial test established that although the mean scores of the treatment group had a higher value (M = 2.24, SD = 1.27) than the control group (M = 2.03, SD = 1.27), there was no statistically significant difference between the two groups of students ($t_{(44)}$ = -0.566, p = 0.574) as indicated in Table 10. If there had been a difference in pretest scores between the two groups, then the students would not be starting from the same baseline; therefore, there would be a need to include the differences as covariance in the analysis using ANCOVA.

Research Question 2

The WRI posttest scores of the treatment and control groups were compared using independent *t*-test statistics to determine if significant differences emerged between the two groups after implementing the intervention. The results indicated that the WRI posttest scores for the treatment group (M = 3.08, SD = 1.33) and that of the control group (M = 3.10, SD = 1.56) were not significantly different (t $_{(44)}$ = 0.041, p = 0.968) as indicated in Table 11.

To measure the impact of the interventions in each of the treatment and control groups, the WRI scores taken in fall 2007 (pretest) were compared to WRI scores taken in spring 2008 (posttest) using paired sample *t*-test statistics. The analysis showed there was a significant increase in WRI for both the control group (t $_{(22)}$ = 4.78, p < 0.001) and the treatment group (t $_{(22)}$ = 5.01, p < 0.001). It can therefore be concluded that although there was no significant difference between the posttest scores between the control and treatment groups, the interventions for each group produced a significant increase in WRI. *Reading A-Z* produced an increase in WRI as did the normal and accepted sources of remediation in the control group as indicated in Table 9; however, when the two groups were compared, the effects of the intervention in each group were not large enough to show a significant difference in WRI scores between both groups after the intervention. This suggests that the level of increase in scores using *Reading A-Z* was no greater than the normal and accepted sources of remediation.

Table 10

Comparison of WRI Pretest Scores

Group	Mean	SD	df	t	Significance - p
Control	2.03	1.27			
			44	-0.566	0.574
Treatment	2.24	1.27			

* Significance at $p < 0.05$

Table 11

Comparison of WRI Posttest Scores

Group	Mean	SD	df	t	Significance - p
Control	3.10	1.56			
			44	0.041	0.968
Treatment	3.08	1.33			

*Significance at $p < 0.05$

Summary

Two hypotheses were evaluated for this study of Spanish-speaking children in grades one through three. The null hypothesis for the first research question stated that there would be no difference in the instructional reading levels of students in both the control and treatment groups. The results of comparing the pre- and the posttest scores concur that there was no statistically significant difference in improvement in instructional reading levels of one group over the other; both the treatment and control groups showed an improvement in instructional reading level. Because of this statistical analysis, the null hypothesis was accepted.

The null hypothesis for the second research question stated that there would be no difference in the words recognized in isolation of students in both the control and treatment groups. The results from comparing the pretest scores and the posttest scores concur that there was no statistically significant difference in words recognized in isolation of one group over the other as both the treatment and control groups demonstrated an increase in words recognized in isolation. The null hypothesis was accepted based on this statistical analysis.

In the next chapter, the researcher will discuss the findings and the limitations to the research, and make recommendations for future studies.

Chapter V

Discussion

As stated in the sections "Cultural Characteristics of Latinos" and "Five Components of Literacy Language" in chapter one, ELL may experience more difficulty with reading due to a lack of prior familiarity with English. The researcher assessed the efficacy of *Reading A-Z* on the instructional reading level and word recognition in isolation among Latino students in grades one through three. This final chapter reviews the research problem, the methodology, and the results. It also presents the limitations to the research, implications of the study, and recommends the direction for future study.

Review of the Problem

The No Child Left Behind law requires the narrowing of achievement between ethnic and varied socioeconomic groups (Virginia Department of Education, 2006). Because all subject areas require adequate grade level reading skills, Latino students are at a disadvantage. As stated in the "Oral Language" section in chapter one, Latinos have unique learning styles that may not be understood or accepted by the classroom teacher. The researcher rejects the government's one-size-fits-all educational philosophy, and she urges the acceptance of individual cultural learning styles in this study. The researcher's goals were to study the tutoring services that are offered to Latino students and find ways of developing the reading skills that lead to language literacy.

Research involving the five components of language literacy states that some students require passage text reading due to the context clues that are provided (Begeny & Martens, 2006; Corn, 2006; Morrow, Kuhn, & Schwanenflugel, 2006) while other

students require reading words in isolation to retain English vocabulary (Apthorp, 2006; Spencer & Guillaume, 2006; Vardell, Hadaway, & Young, 2005). This was the basis for choosing the two research questions and the intervention which consisted of passage text reading and reading words in isolation. Will implementation of *Reading A-Z* have a greater impact than normal and accepted sources of remediation on instructional reading levels of low-performing, Spanish-speaking students as measured by Phonological Awareness Literacy Screening assessment? Will implementation of *Reading A-Z* have a greater impact than normal and accepted sources of remediation on words recognized in isolation of low-performing, Spanish-speaking students as measured by Phonological Awareness Literacy Screening assessment? The null hypotheses for both stated *Reading A-Z* would not increase the instructional reading level or words recognized in isolation for low-performing, Spanish-speaking students. The null hypothesis was accepted for both after calculating the pre- and posttest scores.

Review of the Methodology

A quantitative study of treatment and control groups was conducted to compare the growth in reading achievement among 46 Latino students who had received tutoring services. Numerical data was collected from the tutors, half of whom used *Reading A-Z* while the others used a variety of other teaching materials. Data from the Phonological Awareness Literacy Screening (PALS) assessment given in the fall prior to implementation provided pretest scores that were analyzed using an independent *t*-test to check for differences between the two groups prior to the intervention. PALS assessment given in the spring provided the posttest scores that were analyzed using an independent *t*-test to check for differences between the two groups after the intervention. These

scores were analyzed to check for differences between the two groups to ensure that both

the treatment and control groups started from the same baseline. Growth was measured

from the pretest scores and posttest results using a paired sample *t*-test to compare those

who had received *Reading A-Z* to those that had not.

Summary of the Results

Results from the analysis using independent *t*-tests revealed no significant

differences in the instructional reading levels of low-performing, Spanish-speaking

students who received *Reading A-Z* and those who received normal and accepted sources

of remediation. Both the treatment and control groups produced increased scores

suggesting that all forms of remediation caused an increase in instructional reading level

as measured by PALS. This implies that the level of increase in scores using *Reading A-Z* was no greater than that of normal and accepted sources of remediation.

There was also no significant difference in words recognized in isolation of low-

performing, Spanish-speaking students who received *Reading A-Z* and those that received

alternate forms of remediation. Both the treatment and control groups produced higher

scores, suggesting that all forms of remediation caused an increase in words recognized

in isolation as measured by PALS. This implies that the level of increase in scores using

Reading A-Z was no greater than normal and accepted sources of remediation.

Discussion of the Results

Salzberg (1999) states that test results are reliable and accurate if pretests and

posttests are given to students who do not change from their assigned groups throughout

the study regardless of the range of differences in student achievement. Before the

implementation of the intervention in this study, the range in student achievement for

instructional reading levels based on the fall 2007 pretest scores in first grade was 0.5 to 1.5 (difference of 1.0). The range in second grade was 1.2 to 3.9 (difference of 2.7) with third grade documented between 1.5 and 4.9 (difference of 3.4). The range in student achievement for words recognized in isolation based on pretest scores was identical. First graders ranged from 0.5 to 1.5 (difference of 1.0), second graders scored between 1.2 and 3.9 (difference of 2.7), and third graders 1.5 to 4.9 (difference of 3.4). Starting a school year with these extremes makes it difficult for classroom teachers to plan instruction for all students, and this makes the availability of tutoring services all the more important.

The spring 2008 posttest scores also indicated a wide spectrum of abilities. Assessment results of instructional reading levels suggested that first graders scored between 1.2 and 3.9 (difference of 2.7), second graders 1.2 to 4.9 (difference of 3.7), and third graders 1.5 to 4.9 (difference of 3.4). Posttest scores for words recognized in isolation were similar and ranged from 0.5 to 3.9 (difference of 3.4) for first grade, 1.5 to 4.9 (difference 3.4) for second grade, and 3.9 to 6.9 (difference of 3.0) for third grade. It must be noted that no students in the study regressed in either instructional reading level or in word recognition in isolation.

The final results of the growth comparison of those receiving *Reading A-Z* to those who received normal and accepted sources of remediation should be encouraging even though no significant differences were discovered. Other research studies have reached the same conclusion when studying treatment and control groups of students with disabilities (Sinclair, Christenson, & Thurlow, 2005) and also treatment and control groups of reading achievement (Erion, 2006; Vadasy, Sander, & Peyton, 2006). Others

find that the treatment groups make more improvement and directly relate it to the intervention used in the research (Hancock, 2002; Rashotte, MacPhee, & Torgesen, 2001).   All agree, however, that any information gained during a study is beneficial for future research.

There is much to be learned from individual grade levels and their focus on reading. When both groups of IRL and WRI scores are separated into grades, a distinct difference in improvement is apparent. The IRL treatment group of first grade Latino students had a range of growth from 0.0 to 1.4 with an average improvement of 0.6, or six months, during the research study. This group received *Reading A-Z* which contained mostly passage reading and the use of context clues to build vocabulary meaning. As stated in the "Review of the Literature", first grade instruction concentrates on phonics and the blending of sounds to form words.

The IRL control group of first grade Latino students had a range of growth from 0.0 to 2.7 with an average improvement of 1.3, or one year and three months, over the course of the study. This group received normal and accepted forms of remediation and focused on activities mentioned in chapter three such as word sorts, word families, and spelling words. Phonics is a major area of instruction in first grade and the group receiving more individualized phonics instruction, the control group, made the most improvement in IRL in first grade.

The IRL treatment group of combined second and third grade Latino students had a range of growth from 0.0 to 3.0 with an average improvement of 1.1, or one year and one month, during this research study. This group received *Reading A-Z* with daily passage reading and supported writing activities. These students tended to make just a

small amount of growth or a great deal making the range of improvement the two extremes.

The IRL control group of combined second and third grade Latino students had a range of growth from 0.0 to 2.0 with an average improvement of 0.7, or seven months, over the course of the study. This group received normal and accepted forms of remediation that contained little passage reading nor the practice of using context clues for meaning. The control group had the largest number of students who made no progress in the study with six of the thirteen, or 46%, of first and second grade students making 0.0 progress in IRL.

The IRL treatment and control groups showed vast differences when first grade, the year of phonics instruction, was compared to second and third grade where passage reading occurs more frequently. The students in first grade receiving *Reading A-Z* used more passage and text reading and the results documented a lower improvement score. The students in first grade receiving normal and accepted forms of remediation encountered more phonics instruction than passage reading, and the results documented a higher improvement score when compared to the treatment group.

The IRL treatment and control groups also showed a vast difference when combining second and third grades where passage reading is more prevalent. In this instance, the treatment group made more progress suggesting that *Reading A-Z* is beneficial in the grades where phonics instruction is limited and passage reading is a grade level expectation. The treatment group made four months improvement beyond the control group that experienced more isolated word reading.

The WRI scores for the treatment and control groups also indicate that each grade level has teaching and learning requirements and the remediation offered must match the grade level expectations. The WRI treatment group of first grade Latino students had a range of growth from 0.0 to 1.4 with an average improvement of 0.6, or six months, during the research study. This group received *Reading A-Z* instruction with passage and text reading. WRI measures words that are read in isolation and does not contain passage or text reading. With first graders focused on phonics instruction, WRI does not require context clues for vocabulary building or comprehension.

The WRI control group of first grade Latino students had a range of growth from 0.0 to 2.7 with an average improvement of 1.3, or one year and three months, during the research study. These students received normal and accepted forms of remediation and focused on activities mentioned in chapter three such as word sorts, word families, and spelling words. Phonics is a major area of instruction for first grade and this group received individualized phonics activities without much passage reading.

The WRI treatment group of combined second and third grade Latino students had a range of growth from 0.0 to 3.0 with an average improvement of 1.0, or exactly one year, during the research study. These students received *Reading A-Z* with passage and text reading on their individual grade level performance. Five of the fourteen students, or 38%, made no progress at all; this group has the highest percentage of students making no progress in the WRI category.

The WRI control group of combined second and third grade Latino students had a range of growth from 0.0 to 4.0 with an average improvement of 0.9, or nine months, during the research study. These students received normal and accepted sources of

remediation with many receiving word sorts and flashcards as a major part of their instruction. Four of the thirteen students, or 31%, made no progress at all in WRI.

The WRI treatment and control groups showed a vast difference when first grade, the year of phonics instruction, was compared to second and third grades combined when passage reading is required. The students in first grade receiving *Reading A-Z* received more passage and text reading and the results demonstrate a lower improvement score. The students in the first grade control group who received normal and accepted sources of remediation made more improvement in WRI.

Limitations to the Study

The study has the following limitations:

1. The research subjects represented a small convenience sample.

2. The research subjects represented only one school division.

3. The level of implementation of *Reading A-Z* varied among schools.

4. The number of tutoring sessions varied as a result of uncontrollable circumstances.

5. Results of the study were limited to 18 weeks of remediation services.

6. The different curricula used for the non-*Reading A-Z* group made for uncontrolled instruction.

Implications of the Study

The five components of language literacy, as dictated by NCLB, are the basic components in learning to read. Each one is taught in a sequential order starting with phonological awareness in kindergarten. As stated in chapter two, first grade focuses on phonics instruction, and second and third grades on vocabulary and fluency. Typically, a

student makes a one year progress throughout the school year; those with reading deficiencies may make less.

The IRL, as measured by PALS, was recognized and documented for each student in this study. The IRL includes passage or text reading where context clues surrounding an unfamiliar word give the student an indication of the meaning of that word. Comprehension is also measured in obtaining an IRL with 70% accuracy needed to prove reading comprehension is evident. This also requires passage reading using context clues that familiarize unknown words for the student.

The researcher believes that the control group's isolated word activities and limited passage reading helped increase IRL more in first grade Latino students because they are beginning readers and need decoding skills before reading passages. The seven month difference in improvement between the treatment and control groups' IRL clearly indicates that the control group outperformed the treatment group. This study suggests that passage reading is not necessary to increase the IRL in first grade Latino students. Isolated word activities for first grade are more beneficial to them.

Second and third grade Latino students made more improvement in IRL when passage reading was available. The treatment group received passage reading and related writing activities using *Reading A-Z.* These students outperformed the control group by five months in IRL. The control group for IRL had the highest percentage of students making no progress of the four measured skills recognized in this study (IRL treatment and control scores, and WRI treatment and control scores).

The WRI, as measured by PALS, was recognized and documented for each student in this study. The WRI includes reading words in isolation by grade level. No

passage reading is involved and the isolated word list contains high frequency words that can not be phonetically decoded. The purpose of recognizing words in isolation is to instantly recognize words used frequently in spoken and written English without spending time sounding out individual words. When time is not spent decoding, reading comprehension is much easier for the student.

The researcher believes that the control group's isolated word activities and limited passage reading helped increase the WRI of first grade Latino students more than the treatment group. The seven month difference in improvement in the treatment and control groups' WRI clearly indicates that the control group outperformed the treatment group. This study suggests that first grade Latino students need isolated word reading and do not need passage reading for context clues.

Second and third grade Latino students in the treatment group made a one month improvement over the control group. Although this is not a significant difference, passage reading using *Reading A-Z* benefits second and third grade students because this age spends more time reading for meaning and using context clues. Instruction in these grades includes entire stories with passing comprehension scores expected on written tests.

The analyzed data suggests that overall the control group faired better, even if minimally, than the treatment group in IRL and WRI. A breakdown of the grade levels leads the researcher to believe that there is not a single resource tool that can effectively remediate all students in a primary school. Individual learning styles, ages, and grade level expectations determine what a student needs to reach literacy achievement. The

one-size-fits-all criterion demanded by NCLB is very damaging to Latino students and is not in their best interest for learning to read a second language.

Recommendations for Additional Research

The following are the researcher's recommendations for future research:

1. A longitudinal study of *Reading A-Z* and a control group with less varied tutoring curricula.

2. A longitudinal study of program results to assess the effect of intervention on the range of scores after three years of *Reading A-Z* tutoring services starting in first grade.

3. An analysis of the level of *Reading A-Z* implementation within each grade level.

Conclusion

There are many valid reasons for this research. This dissertation started by acknowledging the need to tutor students and improve their reading achievement to meet national guidelines in order to secure government funds. What transpired over the course of a school year made the researcher reevaluate her priorities and the teaching and assessment methods used in schools. Her focus shifted from viewing students in the subgroups acknowledged by AYP to recognizing the need for differentiated instruction and tutoring services. The Latino students in this study deserved a fair and equal education. All parents want this for their children, and all students deserve the opportunity to become literate, high achieving students with a bright future and successful life.

This study recognized the importance of individual attention to students through tutoring services that were based on each student's achievement. Even though the intervention did not prove to be more successful than other interventions in language literacy development for the Latino students, 46 students were exposed to words on their individual reading level, self-esteem building, and a lifelong love of reading. It is quite possible that the researcher of this study learned as much as the students.

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Appendix A

NCLB Targets
Reading

School Year	% Needed To Pass	% Increase
2001 – 2002	60.7	Base
2002 - 2003	61	0
2003 - 2004	61	0
2004 - 2005	65	4
2005 - 2006	69	4
2006 - 2007	73	4
2007 - 2008	77	4
2008 - 2009	81	4
2009 - 2010	85	4
2010 - 2011	89	4
2011 - 2012	93	4
2012 - 2013	97	4
2013 - 2014	100	5

http://www.doe.virginia.gov/VDOE/nclb.pdf

Appendix B

Parental Consent Form (English)

Developing Vocabulary to Strengthen Reading Skills in Latinos

Melissa Lannom

Liberty University

School of Education

Your child is invited to be in a research study of developing English vocabulary in Spanish speaking children. Your child was selected as a possible participant because Spanish is his/her first language. We ask that you read this form and ask any questions you may have before agreeing to be in the study.

This study is being conducted by Melissa Lannom, a Reading Specialist for Henry County Public Schools. Mrs. Lannom is a graduate student in Liberty University's School of Education.

Background Information

The purpose of this study is to develop English vocabulary in Spanish speaking children that will increase their reading skills at school.

Procedures:

Spanish speaking students will receive additional reading instruction for 25 minutes daily during the regular school day using a program called "Reading A-Z".

Risks:

The only risk that could occur would be that your child would make no gains in reading.

Benefits:

Your child could develop reading skills that are on-grade level, learn more vocabulary words, read with fluency, and understand what is read in English. Reading is used in all subject areas, and understanding will increase in reading, social studies, science, and math.

Confidentiality:

The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify the child. Research records will be stored securely and only Mrs. Lannom will have access to the records.

Voluntary Nature of the Study:

Participation in this study is voluntary. Your decision, whether or not to participate, will not affect your current or future relations with Henry County Public Schools or Liberty University. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

Contacts and Questions:

The researcher conducting this study is Melissa Lannom. You may ask any questions you have by contacting her at Rich Acres School at 638-3366 or emailing her at mlannom@henry.k12.va.us.

If you have any questions or concerns regarding this study and would like to talk to someone other than Melissa Lannom, you are encouraged to contact the Institutional Review Board, 1971 University Blvd, Suite 2400, Lynchburg, VA 24502.

You will be given a copy of this information to keep for your records.

Statement of Consent:

I have read the above information. I have asked questions if I chose to and have received answers. I consent to allow my child to participate in this study.

Signature of Parent _____   Date _____

Signature of Researcher _____   Date _____

Appendix C

Parental Consent Form (Spanish)

Desarrollando vocabulario para fortalecer las habilidades de lectura en estudiantes

Latinos

Melissa Lannom

La Universidad Liberty

La Escuela de Educación

Su hijo/hija está invitado para estar envuelto en un estudio de investigación acerca de como desarrollar vocabulario de inglés en estudiantes que hablan español. Su hijo/hija estuvo seleccionado como posible participante porque el español es su primer idioma. Pedimos que usted lea este formulario y hacernos cualesquier preguntas que tal vez tenga antes de decidir si quiere participar.

Este estudio se está conduciendo por Melissa Lannom, una especialista de lectura para las Escuelas Públicas del Condado de Henry. La Señora Lannom es un estudiante graduado en la Escuela de Educación de la Universidad Liberty.

El propósito de este estudio:

El propósito de este estudio es desarrollar vocabulario de inglés en estudiantes que hablan español para que sus habilidades de lectura en la escuela se mejoren.

Procedimientos:

Los estudiantes que hablan español recibirán instrucción de lectura adicional por 25 minutos diariamente durante el día escolar regular usando un programa que se llama "Reading A-Z".

Riesgos:

El único riesgo que podría ocurrir sería que su hijo/hija no mejore en su lectura.

Beneficios:

Su hijo/hija podría desarrollar habilidades de lectura que son apropiados para su nivel de grado, aprender mas palabras de vocabulario, leer con fluidez, y entender lo que está escrito en inglés. La lectura se usa en todas las asignaturas y su entendimiento se aumentará en la lectura, los estudios sociales, la ciencia, y las matemáticas.

Privacidad:

Los datos de este estudio se mantendrán privados. En cualquier reporte que publiquemos, no incluiremos ninguna información que posibilitará identificar el estudiante. Los datos de investigación se almacenarán seguramente y solo la Señora Lannom tendrá acceso a ellos.

Índole voluntario del estudio:

Participación en este estudio es voluntaria. Su decisión para participar o no participar no afectará su relación actual ni futura con las Escuelas Públicas del Condado de Henry ni con la Universidad Liberty. Si usted decide participar, está libre para no contestar cualquier pregunta o para dejar de participar en cualquier momento sin afectar esas relaciones.

Contactos y preguntas:

La investigadora que está conduciendo este estudio es Melissa Lannom. Usted puede hacerle cualesquier preguntas al llamarla en la escuela de Rich Acres a 638-3366 o por email (correo electrónico) a mlannom@henry.k12.va.us.

Si usted tiene cualesquier preguntas o preocupaciones en cuanto a este estudio y quisiera hablar con una persona aparte de Melissa Lannom, está animado a ponerse en contacto con la Institutional Review Board, 1971 University Blvd, Suite 2400, Lynchburg, VA 24502.

Usted recibirá una copia de está información para guardar.

Declaración de consentimiento:

He leído la información de arriba. He hecho preguntas (si opté por hacerlas) y he recibido respuestas. Doy permiso para que mi hijo/hija participe en este estudio.

Firma del Padre o la Madre _____

Fecha _____

Firma de la investigadora _____

Fecha _____

Appendix D

Not Participating in Research

Parents,

This copy is for you to keep. Upon reviewing your child's progress and talking to the Reading Specialist at your child's school, it was determined that your child is doing well in school and does not need additional tutoring. Your child will not be in this study because he/she is doing well with the reading instruction as it is. Thanks for taking an interest in your child's education. He/she is very lucky to have such caring parents!

Melissa Lannom

Appendix E

Not Participating in Research (Spanish)

Padres,

Esta copia es para ustedes. Despues de revisar el progreso de su hijo/a y de haber hablado con la especialista en lectura, determinamos que su hijo/a esta haciendo muy bien en la escuela y no necesita ayuda adicional. Su hijo no participara en el estudio porque el/ella esta haciendo muy bien con la instruccion de lectura. Gracias por mostrar interes en la educacion de su hijo/a. El/ella tienen suerte en tener padres que se interesan como ustedes.

Melissa Lannom

Appendix F

Confidentiality Statement

Instructions to Reading Specialists and Tutors: Read the statement below and sign at the end. Send the signed form, via courier, to Melissa Lannom at Rich Acres Elementary School.

Confidentiality Statement

The professional responsibility of educators is to fully respect the right to privacy of the students in the school system. The confidentiality must not be abridged by school personnel except when there is clear and present danger to the student.

The Rationale

Confidentiality is an ethical term denoting relevance to privacy. A student has the right to privacy and confidentiality, and educators should ensure that disclosures will not be divulged to others about a student and his/her academic abilities. Procedures, information, and ability levels shall not be disclosed to anyone in the research conducted with the ESL population in the school system.

Summary

An educational setting requires an atmosphere of trust and confidence between student and school employees. All students have the right to privacy and confidentiality.

I have read the Confidentiality Statement and agree to maintain confidentiality of the students in the dissertation research conducted by Melissa Lannom.

_____   _____

Signature   Title or Position

Appendix G

End of Year Progress (English)

Student Name _____

School _____

Parents,

   In January, you agreed to allow your child to participate in a research study I am conducting for a doctorate's degree in Educational Leadership. Your child received 4 ½ months of remediation based on his/her level of learning with the progress made listed below. Your child's information has been, and will continue to be, kept confidential. Thank you for helping me with my research!

Melissa Lannom

Rich Acres Elementary

Your child's instructional reading level in fall 2007   _____

Your child's instructional reading level in May 2008   _____

Definition of reading levels

R = Readiness (reading is on "end of kindergarten" reading level)

PP = Preprimer (reading is on "beginning of first grade" reading level)

P = Primer (reading is on "middle of first grade" reading level)

First = reading is on "end of first grade" reading level

Second = reading is on "end of second grade" reading level

Third = reading is on "end of third grade" reading level

Fourth = reading is on "end of fourth grade" reading level

Fifth = reading is on "end of fifth grade" reading level

Appendix H

End of Year Progress (Spanish)

Student Name_____

School_____

Padres,

En Enero, ustedes acordaron en permitir que su hijo(a) participe en el estudio que estoy realizando para conseguir mi titulo de Doctorado en Liderazgo Educacional. Su hijo(a) recibio 4 meses y ½ de ayuda basado en su nivel de aprendizaje, con la lista de progreso escrita abajo en esta pagina. La información de su hijo(a) ya se ha visto y continuara confidencial. ¡Gracias por ayudarme a realizar mi investigación!

Melissa Lannom
Escuela Rich Acres

El nivel instruccional de su hijo(a) en el otono del 2007 fue_____

El nivel instruccional de su hijo(a) en Mayo del 2008 sera_____

Definiciones de los niveles de lectura

R = Lectura (el nivel de lectura esta "al finalizar de kindergarten")

PP = Preprimero (el nivel de lectura esta " al principio de 1er grado")

P = Primero (el nivel de lectura esta en "a la mitad del 1er grado)

1ro = el nivel de lectura esta "al finalizar el 1er grado")

2do = el nivel de lectura esta "al finalizar el segundo grado")

3ro = el nivel de lectura esta "al finalizar el 3er grado")

4to = el nivel de lectura esta "al finalizar el 4to grado")

5to = el nivel de lectura esta "al finalizar el 5to grado")

Appendix I

Instructional Reading Level – Treatment Group

Student	Grade	Fall IRL	Year/Month Equivalent	Spring IRL	Year/Month Equivalent	Growth "+" Year / Month
T 1	1	PP	1.2	P	1.5	0.3
T 2	1	R	0.5	PP	1.2	0.7
T 3	1	P	1.5	2	2.9	1.4
T 4	1	PP	1.2	P	1.5	0.3
T 5	1	PP	1.2	1	1.9	0.7
T 6	1	R	0.5	P	1.5	1.0
T 7	1	PP	1.2	PP	1.2	0.0
T 8	1	R	0.5	PP	1.2	0.7
T 9	1	PP	1.2	P	1.5	0.3
T 10	2	P	1.5	2	2.9	1.4
T 11	2	3	3.9	4	4.9	1.0
T 12	2	1	1.9	4	4.9	3.0
T 13	2	1	1.9	3	3.9	2.0
T 14	2	1	1.9	3	3.9	2.0
T 15	2	1	1.9	3	3.9	2.0
T 16	2	1	1.9	2	2.9	1.0
T 17	3	3	3.9	3	3.9	0.0
T 18	3	2	2.9	3	3.9	1.0

T 19	3	2	2.9	3	3.9	1.0
T 20	3	2	2.9	3	3.9	1.0
T 21	3	3	3.9	3	3.9	0.0
T 22	3	4	4.9	4	4.9	0.0
T 23	3	3	3.9	3	3.9	0.0

Appendix J

Instructional Reading Level – Control Group

Student	Grade	Fall IRL	Year/Month Equivalent	Spring IRL	Year/Month Equivalent	Growth "+" Year / Month
C 1	1	PP	1.2	1	1.9	0.7
C 2	1	R	0.5	PP	1.2	0.7
C 3	1	R	0.5	P	1.5	1.0
C 4	1	PP	1.2	2	2.9	1.7
C 5	1	PP	1.2	3	3.9	2.7
C 6	1	R	0.5	R	0.5	0.0
C 7	1	PP	1.2	P	1.5	0.3
C 8	1	R	0.5	PP	1.2	0.7
C 9	1	PP	1.2	3	3.9	2.7
C 10	1	PP	1.2	3	3.9	2.7
C 11	2	2	2.9	3	3.9	1.0
C 12	2	PP	1.2	PP	1.2	0.0
C 13	2	2	2.9	2	2.9	0.0
C 14	2	P	1.5	2	2.9	1.4
C 15	2	3	3.9	3	3.9	0.0
C 16	3	3	3.9	3	3.9	0.0
C 17	3	3	3.9	4	4.9	1.0
C 18	3	3	3.9	4	4.9	1.0

C 19	3	2	2.9	4	4.9	2.0
C 20	3	2	2.9	2	2.9	0.0
C 21	3	1	1.9	3	3.9	2.0
C 22	3	P	1.5	P	1.5	0.0
C 23	3	2	2.9	3	3.9	1.0

Appendix K

Word Recognition in Isolation – Treatment Group

Student	Grade	Fall WRI	Year/Month Equivalent	Spring WRI	Year/Month Equivalent	Growth "+" Year / Month
T 1	1	PP	1.2	P	1.5	0.3
T 2	1	R	0.5	PP	1.2	0.7
T 3	1	P	1.5	2	2.9	1.4
T 4	1	PP	1.2	P	1.5	0.3
T 5	1	PP	1.2	1	1.9	0.7
T 6	1	R	0.5	P	1.5	1.0
T 7	1	PP	1.2	PP	1.2	0.0
T 8	1	R	0.5	PP	1.2	0.7
T 9	1	PP	1.2	P	1.5	0.3
T 10	2	1	1.9	3	3.9	2.0
T 11	2	3	3.9	4	4.9	1.0
T 12	2	1	1.9	4	4.9	3.0
T 13	2	2	2.9	3	3.9	1.0
T 14	2	1	1.9	3	3.9	2.0
T 15	2	1	1.9	3	3.9	2.0
T 16	2	2	2.9	2	2.9	0.0
T 17	3	3	3.9	3	3.9	0.0
T 18	3	2	2.9	3	3.9	1.0

T 19	3	2	2.9	3	3.9	1.0
T 20	3	2	2.9	3	3.9	1.0
T 21	3	3	3.9	3	3.9	0.0
T 22	3	4	4.9	4	4.9	0.0
T 23	3	3	3.9	3	3.9	0.0

Appendix L

Word Recognition in Isolation – Control Group

Student	Grade	Fall WRI	Year/Month Equivalent	Spring WRI	Year/Month Equivalent	Growth "+" Year / Month
C 1	1	R	0.5	1	1.9	1.4
C 2	1	R	0.5	PP	1.2	0.7
C 3	1	R	0.5	1	1.9	1.4
C 4	1	P	1.5	2	2.9	1.4
C 5	1	P	1.5	3	3.9	2.4
C 6	1	R	0.5	R	0.5	0.0
C 7	1	PP	1.2	P	1.5	0.3
C 8	1	R	0.5	R	0.5	0.0
C 9	1	PP	1.2	3	3.9	2.7
C 10	1	PP	1.2	3	3.9	2.7
C 11	2	2	2.9	3	3.9	1.0
C 12	2	PP	1.2	P	1.5	0.3
C 13	2	2	2.9	2	2.9	0.0
C 14	2	1	1.9	2	2.9	1.0
C 15	2	3	3.9	3	3.9	0.0
C 16	3	3	3.9	3	3.9	0.0
C 17	3	3	3.9	4	4.9	1.0
C 18	3	3	3.9	4	4.9	1.0

C 19	3	2	2.9	6	6.9	4.0
C 20	3	3	3.9	3	3.9	0.0
C 21	3	1	1.9	3	3.9	2.0
C 22	3	P	1.5	1	1.9	0.4
C 23	3	2	2.9	3	3.9	1.0