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The Effects of Word Recognition and Comprehension Skills and Strategies Implemented with Explicit, Systematic, Balanced-Literacy Instruction

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The Effects of Word Recognition and Comprehension Skills and Strategies Implemented with
Explicit, Systematic, Balanced-Literacy Instruction

By

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A Graduate Field Experience

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Abstract

The purpose of this case study was to answer the question, “Does a tier three intervention plan using a balanced-literacy format and consistent implementation of phonological awareness, vocabulary, fluency, and comprehension activities improve literacy for English language learners (ELLs) with specific learning disability (SLD)?” The participant was a male, ELL-SLD fourth grade student who attended an urban parochial school. The duration of the intervention was one ninety minute session per week over a ten week period. The results showed moderate improvement in his ability to decode words and comprehend below level texts. The greatest gain was in his word attack and word comprehension, indicating the student’s ability to apply phonic and structural analysis skills, use analogies, and read vocabulary to comprehend words.

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Glossary

Anecdotal records: a record of informal observations of reading behaviors.

Alphabetic principle: the understanding that letters represent sound, and words can be segmented into sequences of sound.

Analogy-based phonics: a phonics approach that teaches children to use parts of word families they know to decode words they do not know that have similar parts.

Appropriate evaluation: one of the six principles of IDEA in which trained professionals appropriately evaluate the student for admission to the special education program.

Concept web: graphic organizer that emphasizes the main idea and supporting details of a text.

Decoding (Word Analysis): the ability to sound out words and look for familiar spelling patterns in words to read an unknown word.

Echo reading: a fluency activity in which one reader orally reads the text first, then one or more students imitate or echo the other reader's expression.

Explicit instruction: The intentional design and delivery of information by the teacher to the students.

Fluency: The ability to read a text accurately, quickly, and with expression.

Individual with Disabilities Education Act (IDEA): A law that protects the rights of students with disabilities and helps them receive a free and appropriate education. There are six principles of IDEA: Free appropriate public education, appropriate evaluation, individualized education program (IEP), least restrictive environment, parents and students participate in decision-making, procedural safe guards.

Individualized Education Program (IEP): one of the six principles of IDEA in which teachers, parents, and the student develop an individualized education program for the student. The IEP includes the strengths and weaknesses of the student, modifications for the individual student, and goals for the student to work on during the school year.

Letter-sound relationship: The understanding that every letter is a symbol that represents a sound.

Orthographic knowledge: The ability to use the correct sequence of letters, characters or symbols.

Phonological awareness: the awareness of various sounds such as syllables, rhyme, and individual phonemes.

Reading comprehension: the level of understanding of what one reads.

Repeated reading: a fluency activity in which the student rereads a text multiple times to increase fluency.

Chapter One

Literacy is the essential component for success in most societies. People have moved to other countries and assimilated to their new culture and language for thousands of years. The acquiring of literacy in the new culture is difficult for families who are working just to survive in their new country. The success or failure of students, as English language learners (ELLs), depends on the acquiring of the new language. When an ELL student struggles with acquiring English, it may be with decoding English letter sounds while trying to translate thoughts and concepts into the new language. Sometimes, they may have speech difficulties, learning disabilities, lack of home support, and/ or access to resources. While attending school most, students acquire their new language and often become translators of the new language for their family members. Some ELL students may have learning disabilities which begin to pose new challenges for these students.

These students may not have the English literacy and academic support at home to assist them in progressing with their literacy skills to be successful. When they are identified as having learning disabilities, ELLs with Specific Learning Disabilities (SLD) oftentimes cannot retain new knowledge and skills to help them with their second language (Zehler, Fleischman, Hopstock, Stephenson, Pendzick, & Sapru, (2003). Educators need to provide interventions based on ongoing assessment results for these students who are tier 3 of the Response to Intervention (RtI) continuum (Ehri and Rosenthal, 2007).

This 2012 case study's purpose and hypothesis is to improve the participant's phonemic awareness through the implementation of word recognition skills, and to improve overall understanding of the main idea of a text via the implementation of reading comprehension skills and strategies for an ELL student with reading difficulties and/or specific learning disability (Ehri and Rosenthal, 2007).

Introduction to Participant

The participant, “Jose” (name is changed), a nine and a half year old, fourth grade male student. Jose was born in the United States to a Spanish/English speaking, second generation, immigrant single parent who works the day shift, forty hours per week, and lives with his mother, and step-father (native Spanish speaker with limited English) who works fulltime, second shift. Jose has a fifteen month, half-brother, and an expected baby sibling who was due within the next few months while working with Jose. Jose was very excited about this.

Jose is very motivated to learn although because of his SLD has difficulty sustaining the stamina needed to decode and comprehend material at the fourth grade level. Jose is well-liked by his classmates, is a good helper, has above average listening skills, has a good sense of humor, and usually turns his assignments on time. Jose enjoys Star Wars, Transformers, and Super Heroes, and his favorite sport is soccer. Jose’s mother describes her son as very happy and helpful with his little brother, and willing to do his chores when asked.

Jose’s mother has mentioned that he has difficulty completing any homework. She has tried to provide literacy support although it has been very difficult, and feels she does not have the skills to help him. Jose attends school a Midwest, urban, private, parochial school which has approximately 400 students enrolled, ninety-seven percent of the student population is of Latino heritage, speak Spanish as their native language, and receive free and reduced lunch. This school has Title 1 services and the nearby public school district provides limited special education services for a few students who have gone through the IEP qualifying process. The Response to Intervention program was not implemented as a school-wide program at the time of this study.

As his fourth grade teacher, I looked at his cumulative file for prior assessment results. Jose had an Individualized Education Program (IEP) and qualified for services. It states that he qualifies for SLD, although was not being served at the private school he attends. Before this

case study, given the prior grades' data, and the data from informal assessments at the beginning and end of each quarter, I modified the classroom assignment and activities as well as homework to provide literacy and academic success in his learning environment.

Jose's instructional reading level was at the first grade level. As an ELL, he speaks Spanish and English very well although has difficulty reading and writing in English, and does not know how to read in write in Spanish. He has difficulty with remembering the skills and strategies needed to decode, and build the necessary vocabulary to achieve fluency and comprehension at his grade level in English. Jose is unable to comprehend or retain information to systematically recall the information about what he has read. When Jose was in third grade his IEP expired at the request of his mother, even though she was advised to update his IEP. Against advice from administration and Jose's current teacher, Jose's mother then decided not to put Jose on the list for the local public school system's Learning Disabilities Specialist which would address his SLD needs at the private school location.

Connection to Wisconsin State Standards

Wisconsin's fourth grades, English Language Arts Standards are as follows: A.4.1 Use effective reading strategies to achieve their purposes in reading; A.4.2 Read, interpret, and critically analyze literature; A.4.3 Read and discuss literary and nonliterary texts in order to understand human experience; and A.4.4 Read to acquire information.

This case study intervention research is connected to the following fourth grade Wisconsin Content Standards in English Language in Reading a.) *A.4.1 Use effective reading strategies to achieve the student's purpose in reading*: this study implemented effective, systematic, decoding strategies to increase the participant's phonological awareness and phonics skills to improve his word recognition in easy and somewhat challenging texts, and through implementing effective literacy intervention strategies to improve letter-sound correspondence and comprehension; b.)

A.4.2 Read, interpret, and critically analyze literature: through the implementation of activities to activate prior knowledge, sequence events, and the application of inference skills in various texts;

c.) *A.4.3 Read and discuss literary and nonliterary texts in order to understand human experience:* by utilizing methods to identify and summarize main ideas and key points from literature, and informational texts, as well as had the opportunity to distinguish fiction from nonfiction; and d.) *A.4.4 Read to acquire information:* through the use concept webs for text features and summarizing key details from informational texts.

Connection to Special Education Law

As the researcher of this study, I looked at the SLD categories of weaknesses that were addressed in Jose's IEP. In addition, I reviewed existing evaluation data in his file as well as information provided by the parent and conducted informal interviews with his former teachers regarding their observations and points of concern. His weaknesses were in limited retention of basic phonological awareness literacy skills, oral and written expression, fluency, and reading comprehension. Jose qualified for SLD services although did not receive services because his mother decided not to sign the form for Jose to receive services at the private, parochial school he currently attends. Even though he was not served as a student with special needs at the private school, his former teachers as well as myself continually assessed and provided adaptations to the content standards and modified his assignments for his chronological age, grade level, as required in the special provisions section of the Individuals with Disabilities Education (IDEA) Act (IDEA 2004).

Jose's IEP was evaluated as a basis for developing the procedural plan for this study. The IDEA Act and No Child Left Behind (NCLB) state that certain factors are necessary for successful performance outcomes of special education students such as: parent involvement is vital for academic success, continual assessments to evaluate student's improvement or not,

implement RtI, and provide a least restrictive learning environment to ensure the student receives and has access to research-based, best-practices instruction and learning activities which will improve the student's academic abilities.

Conclusion

Vulnerabilities in language skills are exaggerated for ELL students, especially those with specific learning disabilities, because those students are trying to learn not only language, but a new language. Teachers need to stay current on the research regarding literacy interventions not only for the student who has severe literacy difficulties in the primary grades as well as those students who continue to have difficulties comprehending both narrative and expository texts. This study demonstrates how the implementation of consistent, explicit, systematic balanced-literacy instruction word recognition and reading comprehension skills and strategies will aide in the improvement of word recognition and basic reading comprehension for students with reading difficulties. In the following chapter, I have summarized eight studies which will support components of this study.

Chapter Two: Review of Literature

Literacy for intermediate elementary students with reading difficulties, especially ELLs is most often successful when explicit, research-based interventions are thoughtfully implemented throughout regular instruction as well as with limited one-to-one or small group tutoring sessions. Consistent interventions that engage the reader to think about word recognition as well as to think about the deeper meaning of the text is necessary for all readers especially for struggling readers (Leach, Scarborough, and Rescoria, 2003). Students who have reading difficulties need to move beyond word recognition at the phonemic awareness stage toward learning how to think deeper about what they are reading. Educators need to constantly update their professional pedagogy and methodology to be most effective at implementing interventions for struggling reading students whether or not they are ELL or English-only students in our classrooms. This chapter will look at the research on best-practices for classroom instruction and interventions for all students (Fuchs, Fuchs, and Vaughn, 2008).

Theoretical Perspectives on Literacy Interventions – Balanced Literacy Approach

Research study summary 1. Does proficiency in middle school reading assure proficiency in high school reading? The possible role of think-alouds.

Caldwell and Leslie (2004) analyzed whether on level, middle school readers would succeed in the comprehension of high school texts, especially when encountering problems with content and vocabulary, when explicitly taught the think-aloud strategy along with the other comprehension strategies in middle and high school. Several questions the researchers considered are: Would a comprehension strategy such as think-aloud assist them in other comprehension strategies thereby improving their academic success in high school?; Will think-alouds, as well as activating prior knowledge, retellings and questioning improve overall comprehension in

secondary education?; and Is understanding text structure important to successful comprehension of high school texts?

The units of analysis are prior knowledge, think-alouds, comprehension retellings, and comprehension questions. The methods of analysis are as follows: audio-taping sessions for transcription and clarification, questioning, verbatim written monitoring of think-aloud responses, coding responses as they related to the 12 think aloud categories for each selection, students' choice of reading order of the three passages, and comparing the performances of part one responses of each passage with each student.

The sample for this study consisted of a group of eight eighth-grade students. There were six girls and two boys in the group, all of whom attended either private suburban or public urban schools. Each of the students participating in the study was considered a proficient reader based upon the following criteria: informal reading inventory scores, standardized test scores, and school performance.

Once the sample of students was determined, the researchers chose three pieces of text from high school text books which differed in difficulty level and text structure. The text selections, taken from high school text books, included the following: "Where the Ashes Are" (Nguyen, 1997), "World War I" (1993), and "Characteristics of Viruses" (1998). The readability level for the first text selection ranged from 5th to 8th grade. This was the easiest of the three selections chosen and was written in narrative form. The readability level for "World War I" and "Characteristics of Viruses" ranged from 8th to 10th grade level. These two selections were written as expository text.

Each student was tested individually during three sessions, one session for each text. The following procedure was followed for each set of text. In order to assess prior knowledge, students had to discuss important concepts related to the text before they began reading. Each text

piece was divided into three segments; following each segment students retold what they read. After the retelling students had five factual and five inferential questions to answer. If students did not know the answer or answered incorrectly they were allowed to look back in the text. Students read the first segment silently, and stated the retelling and answered questions. During the reading of the second segment the examiner modeled 11 types of think-aloud strategies with each text. During the reading of the third segment, the students were to think-aloud on their own when they came to the word *stop*. The *stop* marker was placed after several sentences in the text so as not to "overdo the think-aloud process" (Caldwell & Leslie, 2004, p. 327).

After each reading, students received score in four areas: prior knowledge, think-aloud, comprehension retelling, and comprehension questions. Prior knowledge was scored following guidelines established by Leslie and Caldwell (2001). Students received a score of 0, 1, 2, or 3. Think-aloud comments were coded in one of twelve categories. Examiners chose these categories because they were "included in at least seven think-aloud studies and were listed in Pressley and Afflerbach's (1995) extensive literature review" (Caldwell & Leslie, 2004, p. 327).

Comprehension retelling was scored by matching student's statements to explicit text propositions. The number of proposition statements was counted. Students were also scored on their coherence and fluency in retelling. If student's retellings were both coherent and fluent they received two points, if just coherent or fluent they received one point, and if they were either coherent or fluent they received zero points. Comprehension questions were scored as correct or incorrect. Students received a score for answering comprehension questions without looking back and another score for answering questions with look-backs. These two scores were added for the comprehension score.

After students had been assessed with the three texts, the examiners could compare the texts, as well as compare the different strategies used within one piece of text. Examiners first

looked at the area of prior knowledge where there was no significant difference across any of the three passages. Based on the key concept questions asked prior to reading the participants read all three text selections with the same level of familiarity. During part one of the testing; retelling was performed without using the think aloud strategy. Results showed that the length of the retellings were similar for all three texts. A change was noted with regard to the coherence of the student statements. The researchers noted more coherent statements for the narrative text over the two expository text selections. Differences were also noted in the content of the retellings. Findings showed that the amount of inferential thinking varied between text types and their degree of difficulty. In the third part of testing, the addition of the think aloud strategy did not improve these scores.

At the beginning of this study, the examiners questioned if the use of the think aloud strategy was an effective strategy for proficient readers to use as they interact with high school text. The results of this study showed that while the coherence scores did not change between parts one and three of the test, more important information was included in retellings of the narrative text after the application of the think-aloud strategy. No changes were noted in either expository selection. When discussing the strategy of look backs, participants were able to answer more questions about "World War I" than either of the other two texts. This suggests that the think-aloud strategy could have a positive effect with more simplistic texts, but proved unhelpful with the more challenging texts. The content of the retelling increased for the narrative, simpler text, suggesting that, the difficulty level of the text could influence the length of student responses. The types of responses offered by students did not vary based on the difficulty level. Following all three selections, students employed the techniques of summarizing, creating new meaning and questioning. The examiners noted that students showed a limited ability to access their prior knowledge or make personal connections to text.

The results of the study suggest that the think aloud process allowed students to answer more questions about the easier text. Based on the results of the readings of "Characteristics of Viruses", a more difficult text, the think aloud strategy does not improve comprehension. Think aloud is not effective for all text types; however, its usage can be influenced by prior knowledge, difficulty level and text structure. Overall, the examiners found that being a proficient reader and having the ability to apply a specific strategy does not lead to good comprehension. This experiment supports my study by providing evidence that regular curriculum and intervention plans need to include consistent practice with phonological awareness skills and reading comprehension by invoking background knowledge, vocabulary meanings, comprehension strategies and critical thinking skills. It provides a meaningful way to implement reading instruction at the primary grades and students need to have automaticity with deeper thinking before they reach the middle and high school level. The implementation of cohesive oral and written practice with in-depth, sequential retellings, and explanations of both narrative and expository texts at the primary level, I believe in order to have improved comprehension it is necessary to scaffold prior knowledge with critical thinking skills; thereby providing opportunities for literacy success at middle and high school levels.

Research study summary 2. Reading interventions with varying instructional emphases for fourth graders with reading difficulties.

Wanzek and Roberts (2012) state the relative effects of three treatments with instructional emphasis in reading with a comparison condition. The method of this study was conducted in five schools in one district serving students from economically disadvantaged and culturally/linguistically diverse backgrounds. There was standardized criteria allowing for a clear definition of a sample of students with reading difficulties and were at risk for identification

of disability based on their significant difficulties in understanding text; thereby allowing for a generalization of the results of this experimental study.

Fourth grade students with reading difficulties were identified through a two-step screening process: 1.) Classroom teachers were asked to indicate all students who were identified with dyslexia or a learning disability in reading as well as receiving supplemental reading instruction (Title 1, or school tutoring) and/or reading below grade level; and 2.) These students were screened for inclusion in the study using the comprehension subtest of Gates-McGinitie Reading Test.

Eighty-seven students, 54 boys and 33 girls, in fourth grade with reading impairments were assigned through stratified random assignment to one of four conditions: (a) comprehension emphasis, (b) word study emphasis, (c) emphasis of either comprehension or word study based on the student's pretest reading profile, or (d) school-provided intervention comparison condition. In the upper elementary grades, teachers' expectations, of independent reading and learning, increase. Despite these successes with early reading interventions, there are still many students entering fourth grade who struggle significantly with reading (National Center for Education Statistics [NCES], 2005). For improved reading comprehension for intermediate students with reading disabilities, explicit instruction in comprehension with several opportunities to practice reading and understanding text would be most appropriate to improve a student's learning. With word reading strategies that would be addressed through decoding or word recognition practice opportunities are not readily implemented; therefore, impeding reading comprehension for students with reading disabilities.

Wanzek and Roberts (2012) hypothesized that matching the emphasis of instruction to the students' needs (word recognition or comprehension) may enhance outcomes for students with reading disabilities in the upper elementary grades. In their study all interventions included

instruction in word recognition, vocabulary, fluency, and comprehension and differed only in the emphasis and time devoted to specific components of instruction.

Demographic data indicated that no significant differences between the study groups were noted for any of the demographic variables. The total sample included 86% percent was Hispanic, and 90.8% was enrolled in free or reduced –cost lunch programs. The demographic data was collected from the school district along with information on limited English proficiency (LEP).

The procedures consisted of students that had been identified using a battery of assessments administered by the researchers at the beginning of the school year. Then the students were assigned to one of the four study conditions as mentioned. The pretest scores for the students randomly assigned to the response emphasis were further examined to determine whether they would receive word recognition or the comprehension emphasis intervention. The students in the responsive group who scored at or below the 25th percentile at pretest on the Letter-Word Identification (LWID) subtest of the Woodcock-Johnson Psycho-Educational Test Battery-III (WJ III; Woodcock, McGrew, & Mather, 2001) were given the word recognition emphasis intervention. The students in the responsive group who scored above the 25th percentile at pretest on the LWID subtest were given the comprehension emphasis intervention.

Students in each treatment conditions were grouped into small groups of two to four students by a teacher hired by the research team. Intervention was provided in daily 30 minute sessions throughout the school year (28 weeks of instruction. Total number of intervention sessions attended by individual students ranged from 85 to 114. Students randomly assigned to the comparison group did not receive any of the research-provided interventions and continued in school-provided interventions (Wanzek and Roberts, 2012).

Following the completion of the interventions, all students were assessed with the complete battery of measures. All posttest data were collected within two weeks of the last session with each student condition tested each day.

The researchers hired six teachers who received 40 hours of training (20 hours on word recognition and 20 hours on comprehension) and provided intervention for treatment groups. All teachers were women, had a bachelor's degree in education while four of the six had a master's degree, and had previous teaching experience. Each teacher was assigned equal numbers of instructional groups in word recognition and comprehension emphasis to control teacher effects.

The word recognition and comprehension interventions were multicomponent and differed in emphasis on word recognition or comprehension components. The word recognition intervention group received instruction in which a large percentage of the time was focused on teaching students how to read words and apply knowledge to text. The third edition of the Wilson Reading System (Wilson, 2002) was implemented throughout the intervention. The Wilson Reading System contains 12 steps. Lessons in each step were completed until mastery levels were reached. Mastery was measured daily with untimed word-reading measures included with the program. Steps 1 and 2 of the program focused on phoneme segmentation and blending of sounds. Step 3 focused on multisyllabic words and breaking words into syllables. Steps 4 through 6 taught VCe, open syllables, suffixes, and consonant –le syllables. Steps 7 through 12 emphasized advanced word recognition and complex word types with strategies for application in controlled and uncontrolled text. The Wilson Reading System provided materials for ample practice opportunities in word reading, spelling, sentence reading and writing, and connected text on a daily basis.

In addition, cumulative review was built into each part of the lesson. Although the emphasis was on word recognition, the intervention integrated and included instruction in all

essential elements of reading for students. Vocabulary words from the text were introduced in isolation with basic definitions and explanations before reading the text. Comprehension checks occurred in each lesson after reading the text and included questioning, visualizing, and retelling of the text included which was assessed differently than the assessment for the comprehension emphasis intervention.

For the comprehension emphasis intervention the students received reading instruction in which a large percentage of time was devoted to learning comprehension skills and strategies. We implemented Collaborative Strategic Reading (CSR; Klingner, Vaughn, Dimino, Schumm, & Bryant, 2001) using expository science text that aligned with the science topics being covered in the classroom. Significant gains in reading comprehension have been noted for students with reading difficulties and learning disabilities, including English language learners, after CSR participation. In contrast to the word recognition emphasis intervention, CSR devotes more time to instructional strategies in reading comprehension. As part of CSR, reading comprehension strategies were taught in four groups: Preview, Click and Clunk, Get the Gist, and Wrap Up. Students implemented the Preview strategy before reading text by brainstorming and predicting. Click and Clunk was a strategy used during reading to self-monitor comprehension. Within the Click and Clunk strategy, students were taught four fix-up strategies for use when they came across words or sentences they needed to know more about to comprehend the text. Get the Gist was also used during reading when students identified the most critical information (main idea) in the paragraph or section of text they read. Students applied the Click and Clunk and Get the Gist strategies multiple times during the reading of each text. The Wrap Up strategy was employed after reading when students generated and answered questions about the text and reviewed the most significant ideas in the passage. While applying each of the comprehension strategies, students completed learning logs to reinforce use of the strategies. Students learned each strategy

one at a time with daily, cumulative practice in applying previous learned strategies while reading text.

Although the emphasis was on comprehension strategies, the CSR intervention integrated and included instruction in all essential elements of reading for students. As with the word recognition emphasis intervention, vocabulary words from the text were introduced in isolation, with basic definitions and explanations, before reading the text. Word recognition strategies were addressed through the Click and Clunk strategy when students learned and applied fix-up strategies for unknown words. Students were taught to identify affixes and to try breaking multisyllabic words into smaller words. The text-reading portion of the comprehension emphasis intervention mirrored the word recognition emphasis, with about 10 min of the students' time spent reading text (Wanzek & Roberts, 2012).

The school comparison group continued to receive instruction and intervention provided by the school. We collected data on any supplemental school interventions provided to the students in the comparison group through teacher interviews. Eight students (34.8%) in the comparison group received one supplemental intervention. Three additional students (13.0%) received two concurrent supplemental interventions during the school year. Of these 11 students, 9 received between 200 and 360 min of intervention per week. The other 2 students received 25 and 60 minutes of supplemental intervention per week, respectively.

The supplemental school interventions were provided in small groups of 2 to 3 students, with 1 student receiving one-to-one instruction. The school supplied supplemental interventions to students who were identified as at risk for failing the state test. Teachers providing the school intervention indicated a focus on test-taking skills specific to reading passages and answering questions. The teachers indicated this instruction included decoding unknown words, identifying

the meaning of unknown words from context, selecting main ideas, and locating pertinent information in text to address questions.

The pretest scores for the respective dependent variables were used as covariates in the analyses. Effect sizes were also calculated to examine gains from pretest to posttest for both groups. Students' status as LEP was also evaluated as a moderator of treatment. Moderate effect sizes were noted for the word recognition emphasis group on the Word Attack measure when compared with each of the other study groups. However, these effects were not present on the Word Identification measure. A small effect size was noted in favor of the responsive emphasis condition when compared with the comparison group on the Word Identification measure were noted for the comparison group on the Gates Reading Comprehension subtest when compared with each of the other study groups; however, these effects were not present on the WJ III Comprehension measure. The word recognition emphasis group did demonstrate small to moderate effects on the WJ III Comprehension measure when compared with each of the other study groups. The interaction of LEP status and treatment was not significant indicating the LEP main effect did not differ by treatment group.

The results indicated there were no reliable differences between the study conditions in producing student reading gains. No significant differences were noted in student reading outcomes after participation in an intervention emphasizing comprehension skills and strategies or an intervention emphasizing word recognition skills and strategies. In addition, students receiving the researcher-implemented interventions demonstrated similar reading outcomes to students who continued to receive the school-implemented interventions. Students with LEP performed better than other students on measures of word attack and word recognition in all study conditions (Wanzek & Roberts, 2012).

These results suggest that outcomes for students with reading impairments in the upper elementary grades were not reliably different whether basic skills or higher level skills were emphasized, even when students' initial levels were taken into account. Both interventions were designed to increase students' ability to read and understand text. The amount of time spent reading connected text was controlled across the three treatment conditions.

In conclusion, this extensive study suggests that the balanced literacy instruction is important to improve literacy. This study isolated the word recognition group from comprehension instruction and vice versa for the comprehension group. The results did not suggest significant growth when word recognition skills are isolated from reading comprehension skills and strategies. A balanced-literacy format proves to have better results when word study, fluency, writing and comprehension are practiced throughout one lesson (Caldwell & Leslie, 2004).

Research study summary 3. Spellings of word: A neglected facilitator of vocabulary learning.

Ehri and Rosenthal (2007) tested whether students would learn vocabulary words better when they were exposed to the spellings of the words during the study periods than when they were not exposed to the spellings of words. The researchers tested this hypothesis with both second grade and fifth grade students. Researchers also examined the fifth grade readers to determine whether higher level readers would benefit more from seeing the spelling of vocabulary words than lower level readers.

The independent variable was the presence of the spelling of the vocabulary words during the study time versus the absence of the spelling for vocabulary words. The dependent variables were as follows: measurement of how quickly the students learned the words (pronunciation and

definition) throughout several trials, as well as scores on posttests assessing delayed memory for pronunciation, spellings, and meanings of the words.

Study one consisted of twenty second graders with a mean age of 7 years and 7 months attending an urban school with a large minority population. Each student read on level, as was designated by their scores on the Woodcock Reading Mastery test (Woodcock, 1987); however, each student's vocabulary level was below average on the Peabody Picture Vocabulary Test (PPVT; Dunn & Dunn, 1997; Ehri & Rosenthal, 2007).

Study two consisted of thirty-two fifth graders attending the same SES school as the sample in the first study. The students were divided into two groups based upon their different levels of orthographic knowledge: 14 students were high level readers and 18 students were low level readers. The higher group read real words at a 7.3 grade equivalent (GE) level and nonwords at a 4.8 GE level. The lower group read real words at a 4.6 GE level and nonwords at a 2.2 GE level. The groups also differed in terms of spelling ability (Ehri & Rosenthal, 2007).

Throughout both studies students were worked with on an individual basis. Students were involved in an explicit learning task where they were taught a set of low-frequency nouns using flash cards. The words used were unknown to the students. The students were given several trials to practice word pronunciations and meanings. The words were introduced in the initial trial, and recall was tested in following trials. Following each attempt at recall, the students were provided with correct responses. The following techniques were used to teach the meaning of each word: picture cards, definitions, and multiple sentences that included the words for clarification and word usage. Trials continued until students either reached criterion set by the researchers or the maximum number of trials.

Students learned two sets of words. In the experimental group, the spoken words were paired with their spellings. Spellings were shown after every introduction and recall

attempt. However, in the control group the students learned the spoken words only. In addition, the spellings of words were not present during recall tasks for the control group; this showed that any benefit from the spellings was based on the students' memory. As soon as the words were shown the experimenter pronounced them, thus removing students' need for decoding and allowing the retention of the spellings to be incidental.

In study one, the first experiment, second graders students were taught two sets of six nouns. In the experimental condition, spellings were shown as students learned the first set of words, but not the second. Researchers worked to keep the data collection reliable by counterbalancing, or rotating, the sets of words taught between conditions and students. When the spellings were present, the students were given an initial study trial followed by the recall trials. All six nouns were used during all trials. To improve reliability, pronunciation trials were varied with the definition recall trials. Each student was provided a minimum of six and maximum of nine trials to learn the pronunciations and meanings to a criterion of three perfect consecutive trials (Ehri & Rosenthal, 2007). Two types of recall trials were conducted: pronunciation and definition. With regard to pronunciation recall, the students were shown a drawing representing the word, with no spelling and asked to recall its pronunciation. The experimenter then provided the student the correct response supplying the pronunciation, spelling, definition and a clarifying sentence including the word. Students were expected to repeat the word and sentence. Each trial used a different clarifying sentence. When completing the definition recall trials, each student heard the word, saw the spelling and attempted to remember the meaning. Again, students were provided with the correct definition and a clarifying sentence. Students were expected to repeat each word along with its meaning. In the control group, spellings were absent. As the experimental conditions were followed, the procedures, except the spellings, were not shown. In addition, each student was expected to pronounce the words more times than the students in the

experimental group. This was done to ensure that practice was not a factor when determining the difference between the groups with regard to the memory of the words.

In the second study, the fifth graders followed the same procedures, with a few exceptions. Ten nouns were used in this experiment for both the experimental and control groups. The words were longer and included two and three syllables. Each student was given a minimum of five and maximum of eight attempts to learn pronunciations and meanings of the words to a criterion of three perfect successive attempts (Ehri & Rosenthal, 2007).

When examining second grade students' performance in the first study, word learning progressed, as the data showed that it was easier for students to recall meanings than pronounce words. However, a superior recall of both word meanings and pronunciations occurred when spellings were provided to students. When examining the posttests given the day after each set of words were taught, which examined delayed memory of pronunciations, spelling and meanings, students did a better job recalling pronunciations when they had been provided with the spellings than those who had not provided with the spellings. Students more accurately spelled words that they had seen in the initial study trial. Finally, when identifying word meaning, students more accurately identified words they had seen during the initial study trial. These posttests indicated that the spellings had had an impact upon students' memories beyond the initial study trial as they had been stored in memory (Ehri & Rosenthal, 2007). Based upon these results, Ehri and Rosenthal concluded that grapho-phonemic connections had been activated when spellings were seen, heard, and repeated, and, as a result, pronunciations were secured in memory that led to a stronger attachment of meaning (Ehri & Rosenthal, 2007).

In addition, when examining fifth grade students' performance in the second study, similar to the second graders in the first study, the fifth grade students were able to recall meanings better than pronounce words. Fifth grade students also had better recall of both word meanings and

pronunciations when spellings were provided to students; however, the advantage of spellings was much greater for higher level readers. Based on these results, Ehri and Rosenthal derived the same conclusion that grapho-phonemic connections had been activated when students saw, heard, and repeated spellings. As spellings helped both the second and fifth graders learn new words, Ehri and Rosenthal conclude that spellings are not limited to a certain developmental level during the elementary grades, instead it "extends over all levels of reading" (Ehri & Rosenthal, 2007, p. 404).

The findings of this study demonstrate how essential orthography is to vocabulary development at various levels of reading instruction. Teachers must take time to not only discuss and define new words, but also emphasize their spellings during explicit instruction. The study also showed that helping students learn the spellings of words improves their ability to learn word pronunciations and meanings. Educators must remember that when students are learning new words, the pronunciation is memorized and then associated with prior connections in memory to be retrieved at a later time. Ehri and Rosenthal (2007) took this a step further by finding that spellings help to secure pronunciations and meanings, as well as provide clarity. For educators, researchers and students alike to realize that orthography plays a significant role in vocabulary development is of paramount importance to implement pertinent and relative effective vocabulary instruction across the curriculum. The researcher, of this case study recognized that orthography is an essential element needed to improve letter/sound correspondence and phonics skills.

Research study summary 4. Late-emerging reading difficulties.

Leach, Scarborough, and Rescoria (2003) compared the reading, cognition and language skills of a variety of fourth and fifth grade students. The sample included one hundred sixty-one students who were put into 3 groups: those identified with early-identified reading disabilities (RD), those late-identified reading disabilities following the third grade and a group of typically

developing students. The researchers asked three questions during the course of the study: a.) How heterogeneous are children with late-identified reading disabilities with regard to their strengths and weaknesses in various components of reading skill?; b.) In comparison with early-identified cases, do late-identified disabled readers have less severe, less broad, or altogether different profiles of abilities?; and c.) Does late identification of the reading problem occur because schools have overlooked earlier weaknesses, or because the child's reading difficulties actually emerge later?

Most fourth and fifth graders with late-identified RD can be identified based on comprehension-based weaknesses. Additionally, they have lower level processing problems that are typically noted in younger children with RD.

The sample included 161 participants from both the fourth and fifth grades for 12 elementary schools in Philadelphia. The children were primarily Caucasian with 5% being from a range of other ethnic minorities.

The children participating in the study were divided into 4 groups: a.) Early School-Identified: persistent - children in this group were identified as having a reading problem before fourth grade and continued to receive reading-based remediation within 1 school year prior to data collection; b.) Late School-Identified-children in this group were identified as having a reading problem before fourth grade but remedial services were discontinued prior to the third grade and never resumed; c.) Parent Concern: children were identified as having a reading problem by the school but their parents had expressed moderate or strong concern about their child's reading at some point during the primary grades; and d.) No History: children who have no history of reading difficulties and parental concerns were mild in the primary grades.

The children participating in the study were given the following tests of reading and spelling abilities, cognition and language abilities and two questionnaires: a.) the Word

Identification and Word Attack subtests of the Woodcock Johnson Psycho-Educational Battery-Revised (WJ-R; Woodcock-Johnson, 1989); b.) Reading Comprehension subtest of the Peabody Individual Achievement Test-Revised (PIAT-R; Dunn & Marquardt, 1989); c.) two experimental spelling-to-dictation tests; d.) Block Design and Vocabulary subtests from the Wechsler Intelligence Scale for Children; and e.) review of school records.

Tests were administered individually in April, May and June. In order for the individual differences to be noted based on test results and to prevent fatigue, the tasks were given in the same order: rapid serial naming, reading speed, word identification, word attack, visual-verbal learning, reading comprehension, phonological awareness, listening comprehension, exception word spelling, pseudo word spelling, print exposure, block design, self-efficacy rating, and vocabulary.

The researchers analyzed the data in 6 different steps, and then began identifying any reading skill deficits through an analysis of the reading and spelling scores. Based on this data the children were then put into ability groups based on whether or not a deficit was determined and the type of deficit it was. A comparison was then drawn between groups based on their literacy abilities and other characteristics. The children's educational history was also used to determine whether their RD was early- or late-emerging. The early- and late-emerging groups were compared based on all testing data. The last step included an analysis of prior achievement test data.

Based on the data collected the researchers determined that children with late-identified RD are not a homogenous group. These children exhibited word-level difficulties but had adequate comprehension abilities and vice versa. Children in the study also exhibited both issues. This was consistent with the view that many children in these grade levels struggle in comprehending written materials. Word-processing deficits were also found in a high percentage

of students which points out that word level skills such as word recognition, decoding, and spelling continue to be issues of students following the primary grades. The researchers expected students with weak comprehension to also exhibit weak word recognition skills and for those with weak word recognition to have poor comprehension. A weak tendency was noted and child with early-emerging RD with word recognition difficulties showed strong comprehension in the later grades.

Supporting the hypothesis that weak word recognition skills will delay their ability to effectively comprehend text in the early grades, and with regard to the children with comprehension only delays, the group's vocabulary, listening comprehension, block design and FSIQ were lower than their typically developing peers but not in a significant manner, this research lends itself to prior research that states that comprehension depends on a host of factors. Among students with word-level delays only, these children have successful comprehension because of the use of other skills such as cognition language skills and possibly through the use of context clues. Among students with mixed delays, the delays these children have stem from multiple delays including lack of word recognition, vocabulary, language structure, background knowledge and an inability to infer.

Educators must increase their awareness of the emergence of students with RD because declines in their progress may be abrupt in comparison to their typically developing classmates. Teachers must be alert to their assessment results and adjust their instruction accordingly. For example, a child with weak comprehension skills may have low word-level processes abilities. Therefore, distinguishing the actual area of deficit at an early age is vital to successful in literacy development with age level peers. Leach, Scarborough, and Rescoria (2003) state that early interventions are imperative when working toward prevention because it is crucially helpful in

preventing the emergence of late-identified reading disabilities as well as having a variety of diverse assessment tools on hand to help identify students' specific issues.

Research study summary 5. A quasi-experimental validation of transactional strategies instruction with low-achieving second-grade readers.

Brown, Pressley, Van Meter, and Schuder (1996) investigated if students' comprehension of text was enhanced due to the method of instruction used within the classroom setting. The independent variable of this study was the type of instruction, specifically Students Achieving Independent Learning (SAIL) program, a method using Transactional Strategies Instruction (TSI) versus the non-SAIL program. The dependent variables were as follows: strategies interviews, story lessons, retelling questions, think aloud activities, and the Stanford Achievement Test subtests. The subtests included reading comprehension and word study skills.

The sample included 60 second graders reading below the second-grade level at the beginning of the school year. There were five groups of six students each receiving transactional strategies instruction and five groups of six students each receiving non-SAIL reading instruction. The researchers attempted to insure groups were similar by using informal testing (basal passages and word lists), previous year's grades and reports, Chapter 1 assessments, which verifies low socioeconomic status, and a standard achievement test. Students with attention or behavior problems were not included in the study.

The procedure was quasi-experimental and conducted during one academic year. The ten groups of six students were located in different classrooms. The teachers used within the study were not assigned to groups randomly, due to teacher experience with TSI methodology. Five SAIL teachers and five comparison classroom teachers were selected from separate buildings. All teachers were females with curriculum experience; however, the type of curriculum varied. In addition all teachers participated in informal screening called the Theoretical Orientation to

Reading Profile (TORP). The TORP was used to measure teacher identification with phonics, skills, and whole language. Extraneous variables that were controlled by the researchers were: school district, reputation, teacher experience, curriculum used, and texts (ex. *Fox Trot* and *Mushroom in the Rain*).

Students in the SAIL classrooms were taught to use to use comprehension strategies during reading, including but not limited to prediction, monitoring, summarizing, and looking back clarifying confusion as well as thinking aloud. Strategies were taught through direct explanation, modeling, coaching and guided practice. In the comparison classrooms, teachers taught from a more diverse perspective including whole language, phonics, word attack and other comprehension skills, both before and after reading a selection. It was noted that comparison teachers tended not to teach in an explicit manner that required verbal responses from students.

Test data was collected through the following methodologies: strategies' interviews given twice, story lessons including retelling questions given once, and a think aloud task given once, and two subtests of the Stanford Achievement Test which included reading comprehension and word study. Data was collected and rated in various formats. Strategy interviews were scored in two different ways: 20% of interviews were scored by two raters and the other 80% were scored by one of the two. Utilization of two raters allowed for increased validity. Any strategies discussed by students were recorded. With regard to the story lessons, lessons were transcribed from video-taped lessons. Four raters, with varied skills sets, read the transcripts. The transcripts were analyzed for strategies teaching, explanation and modeling of strategic processes and encouragement of interpretive construction of text. When reviewing data for the recall of the stories as well as think-alouds, the researchers used a modified analytic induction approach. Finally, the fall to spring increase in the raw score means from the standardized subtests were used to compare data between the SAIL and comparison classrooms.

When looking at the overall data the SAIL students outscored their counterparts significantly. The strategies' interviews were used to analyze the difference between the two groups in regard to their awareness of strategies and how many strategies they used during a given reading task. Comprehension strategies and word attack skills were the focus of the interview. No differences were noted in the fall at the beginning of the study. In the spring, the comprehension strategies reported by the non-SAIL students were descriptively lower than the students in the SAIL classrooms. With regard to word attack skills, the results were similar. Overall, the interview results showed that SAIL students had more awareness of comprehension and word attack strategies.

The next variable tested was based on story lessons taught in the classroom based on two stories *Mushroom in the Rain* and *Fox Trot*. Instruction in the classroom varied. The results of the retelling task showed that students in the SAIL classrooms were more interpretive readers than the students in the non-SAIL classrooms. The researchers noted that teachers in the SAIL classrooms spent more time modeling and focusing on strategies during the lessons and expecting student responses to text leading to the deeper interpretations. When the lessons were analyzed with regard to strategies teaching more strategies were taught in the SAIL classrooms than in the non-SAIL rooms. This could relate to the longer lessons noted in the SAIL classrooms.

The think aloud task was based on an Aesop's fable about a dog. Analysis of the data was based on the coding of student responses based on their use of strategies. Again, students in SAIL classrooms used more strategies than those in the non-SAIL classrooms. Researchers also analyzed the differences between the two groups with regard to their use of text or reader-based information in their responses. This data mirrored that gathered in the strategy interview. SAIL students were more interpretive than the comparison students, showed by their use of more reader-based information.

The researchers stated that students in the SAIL classrooms were becoming self-regulated readers by independently applying a strategy while reading. At the end of the yearlong study, the students in the SAIL classroom scored higher than their counterparts in the non-SAIL classrooms on both of the standardized subtests.

This is a valuable piece of research for the following reasons. First, the extraneous variables, such as teacher ability and student demographics, were factored into the study so they could be controlled. Second, the study utilized multiple methods for data collection and analysis which enhanced the validity of the results. The results of this study imply that literacy teachers must be intentional about teaching comprehension strategies to students. Teachers must understand the need for students to see each strategy being used through explicit modeling and also understand the importance of consistent student practice with their guidance.

Research study summary 6. Descriptive study of services to LEP students and LEP students with disabilities.

Zehler, Fleischman, Hopstock, Stephenson, Pendzick, & Sapru (2003) provide findings based on data collected in the 2001-2001 school year of the use of particular services for Limited English Proficient (LEP) students and LEP with disabilities in grades K – 12 in public schools in the United States which served at least one LEP student through the use of a Descriptive Study. This Descriptive Study's criterion is based on a prior study that was conducted in 1991-1992, noting that services should be student-centered, comprehensive, and objective (Zehler, Fleischman, Hopstock, Stephenson, Pendzick, & Sapru, 2003). LEP students are defined as students who are not born in the United States, whose native language is not English or who do not have proficiency in English (Zehler et al., 2003). The three questions the researchers posed were: a.) "What are the demographics of LEP and SpEd-LEP?; b.) What kind of instructional

services do LEP and SpEd-LEP students receive, and do they align with statewide standards?; and c.) What are the outcomes of LEP and SpEd-LEP (Zehler et al., 2003, p. 24)? ”

Surveys were used to gather data from public school districts. The surveys consisted of two sets of questionnaires, one focused on LEP and Special Education - Limited English Proficient (SpEd-LEP) students completed by administrator/coordinator, and the second set of questionnaires were sent to students and services and the other focused on that were and coordinator/lead teacher, respectively.

There has been a substantial increase in the number of LEP and SpEd-LEP students in the United States public schools in the past decade, and continues to grow. The sample included 1,315 school districts that served at least one LEP student, and 3,424 school that served at least one LEP student. “Responses to the LEP questionnaire were received from 1,064 school districts (80.9 percent), and from 2,361 schools (80.0 percent). Responses to the questionnaire on SpEd-LEP students were received from 939 districts (71.4 percent) and 1,942 schools (3.8 percent) (Zehler et al., 2003, p. 28).”

The variables were key aspects of LEP students, and were used to define service types such as the extent of LEP instructional services and the extent of use of the student’s native language instruction. According to the research and findings of the Descriptive Study, SpEd-LEP students are less likely to receive services, and more likely to receive instruction in English than LEP students. Instructional services for Spanish-language SpEd-LEP students differed from services received by SpEd-LEP students from other language backgrounds, even though the largest section of LEP student population is enrolled within only a few districts, there are many districts across the U.S. serving a small number of LEP students, therefore instructional services differ significantly in the areas of the extent services are provided, usage of their native language,

and for SpEd-LEP services provided inside the classroom versus outside of the classroom (Zehler et al., 2003).

In addition, during the last decade there has been a change in LEP instructional services toward services provided in English, there has been a significant increase in the number of teachers who work with at least one LEP students, as a result six out of ten teachers who worked with LEP students reported a median of four hours of relevant in-service training. District coordinators reported that the instruction LEP and SpEd-LEP students received was less aligned with State standards than that of non-LEP students. Many school districts and schools had considerable difficulty in providing a count of SpEd-LEP students, fewer LEP students were in special education than the entire student population as a whole, compared to LEP students, SpEd-LEP students are less likely to receive LEP instructional services, and more likely to receive instruction in English. Instructional services for Spanish-language SpEd-LEP students differed from services received by SpEd-LEP students from other language backgrounds (Zehler et al., 2003).

The findings stated were as mainstream classes become more diverse, in ethnicity, English proficiency, and instruction, teachers and aides face new challenges, which should be answered with additional training. Districts should keep better records on LEP and former LEPs, and consider both when analyzing student outcomes. Schools need to determine as early as possible if students' difficulties stem from second language learning or from a disability, and provide support accordingly. Further efforts are needed to define effective instruction for SpEd-LEP students, and to promote increased collaboration across the LEP and special education programs in providing SpEd-LEP services (Zehler et al., 2003). When classroom teachers administer their baseline assessments for the school year they need to analyze their ELLs assessments results

through the lens of tiering their students by focusing the literacy needs of ELLs who have reading difficulties as well native English speakers with reading difficulties.

Theoretical Perspectives on Literacy Interventions – Unbalanced Literacy Approach

Research study summary 7. Remediating reading comprehension difficulties: A cognitive processing approach.

Mahapatra, Das, Stack-Cutler, and Parrila (2010) state that unless cognitive processes underlying reading are included in the remediation, remediation will not be successful in promoting transfer to broader aspects of reading. The research found that many students with reading difficulties have weaknesses in their literacy sub skills along with problems generating background information, developing inferences, are less aware of when they do not understand what they read and have difficulty combining information in working memory to form mental representations of text. Therefore, the researchers suggest that it is necessary to implement these components in a remediation program (Mahapatra et al., 2010).

Mahapatra, Das, Stack-Cutler, & Parrila (2010) suggest proficiency in reading demands mastery over two different components: (a) word reading and (b) reading comprehension. Their study suggests that a cognitive-based remediation program for English-as-a-second-language (ESL) poor readers in India, who had significant difficulty in comprehension, had improved their comprehension.

The researchers examined twenty-eight fourth grade students from two English-medium schools. Fourteen ESL students who received remediated instruction had significant difficulty in comprehension, and the other 14 ESL students who were on-grade-level readers did not receive remediation instruction. These twenty-eight students were examined first with pretesting with word reading, comprehension, and planning-attention-simultaneous-successive cognitive processing, and then post tested using the same categories (Mahapatra et al., 2010).

The methods used to remediate these areas were Planning Attention Simultaneous Successive (PASS) and the PASS Reading Enhancement Program (PREP) guidelines. The assessments targeted the ability to read words for meaning, inference, awareness when misunderstandings occur, and enhance working memory to form representations of text found in the PREP assessment (Mahapatra et al., 2010). The researchers focused on word reading and comprehension and suggest that after evaluating pretest data a through planning-attention-simultaneous-success cognitive processes intervention indicated a substantial improvement in comprehension. My study on word recognition and comprehension also suggests that after evaluating pretest data to develop a systematic, explicit modeling, and a balanced-literacy intervention plan with informal assessing throughout the intervention, the posttest data would indicate moderate improvement.

The participants were tested individually in the school they attended. Pretesting included the word identification subtest and passage comprehension subtest from WRMT-R and the basic battery of Das-Naglieri CAS, across two sessions, one day apart, and totaling one hour and forty-five minutes to complete the assessments. Following the pre-assessments PREP remediation was administered to the participants who were identified as readers who had difficulties. This was a prescribed process as stated in the PREP manual. Remediation was given during school hours, although the time was determined for the convenience of the participants, as well as their teachers. The participants were able to attend their regular classes. The duration of this remediation program continued for fifteen sessions over two months for one hour each session.

The PREP remediation program consists of the Planning system which involves the executive control system responsible for controlling and organizing behavior, selecting or constructing strategies, and monitoring performance. The Attention system is responsible for maintaining arousal levels and alertness and for ensuring focus on appropriate stimuli. The

information processing system uses Simultaneous and Successive processing to encode, transform, and retain information. Participants were highly motivated. The post assessment environment and administration were the same as for the pre assessments (Mahapatra et al., 2010).

The findings for the cognitive-based remediation program significantly enhanced the treated group's reading comprehension, and the program had a beneficial effect on word reading even when the group of readers had close to average scores on the pretest. In addition, the cognitive-based remediation program resulted in an improvement in simultaneous processing. The treated group of readers acquired adequate cognitive strategies and language analysis skills to push them over the norm for comprehension of their second language (English) (Mahapatra et al., 2010). Following the application of strategies and skills, the participants benefited more from regular classroom instruction. Regardless of the study's limitations, this current study has introduced evidence that PREP as a cognitive remediation program has potential for substantially improving comprehension and, to a lesser extent, coinciding processing scores for children who do not speak English as their first language as it has been shown to do among native speakers of English.

The researchers' findings indicate that among ESL students in the fourth grade, the cognitive-based remediation program (PREP) has potential for improving comprehension and cognitive processing. Post-assessment results indicate that normal readers scored significantly higher than participants with reading difficulties on word reading and especially on reading comprehension. Participants with reading difficulties showed significant differences between normal readers and readers who have difficulties with word reading or reading comprehension posttest performance. The differences between the two groups were noteworthy. Both poor and normal readers were found to be "average" with respect to their overall intellectual functioning

(Full Scale score on CAS was within the range of 90–109) but varied in respect to their strength in individual cognitive processes (Mahapatra et al., 2010). Participants with reading difficulties had demonstrated average recognition of word reading both at the pretesting and post testing stages. This may or have not been a factor when given better processing strategies through the PREP program. Overall, the struggling reader participants made significant improvements in reading comprehension after receiving the PREP program for the duration of the study (Mahapatra et al., 2010).

In conclusion, the findings suggest that the PREP program was successful for Indian, fourth grade struggling readers, and many questions still need to be answered, such as: Would all students with reading comprehension difficulties benefit from this program?; Would it be just as effective for educators to ask more critical thinking questions while assisting students with comprehension and recall strategy reminders during research-based interventions?; and/or Would the PREP program still be as effective if struggling readers do not have on-level word recognition? These are a few questions that need to be considered when thinking about using the PREP program for intervention implementation. A consistent, directed plan is an important component of a thoughtful literacy intervention, although there needs to be flexibility and balance with authentic curricular components and connections as well.

Research study summary 8. Use of evidence-based, small-group reading instruction for English language learners in elementary grades: secondary-tier intervention.

Kamps, Abbott, Greenwood, Arreaga-Mayer, Wills, Longstaff, Culpepper, and Walton (2007) state that in the United States the growing population of English Language Learners (ELL) has an impact on the instructional environment in American schools. There is not a direct correlation between ELL students and ethnicity, although the large increase is due to growth in the Hispanic population. The following research is based on four hypotheses: a.) all students in

the experimental group (ELL and English-only) will significantly demonstrate more growth in measures of early literacy skills over time than students in the group; b.) ELL students receiving tier 2 interventions will perform at similar levels on measures of early literacy skills to English-only students receiving interventions; c.) ELL students enrolled in direct instruction, tier 2 interventions will progress at a faster rate than students enrolled in ESL/balanced literacy interventions; and d.) a larger percentage of students enrolled in direct instruction, tier 2 interventions will perform at benchmark levels than students enrolled in ESL/balanced literacy interventions (Kamps et al., 2007).

Direct Instruction (DI) fits the criteria of the necessary instruction ELLs need to improve reading skills and comprehension (Kamps et al., 2007). The researchers believe DI is: a.) evidenced-based; b.) explicitly taught; and c.) a curricula that includes a scope and sequence of essential reading skills as well as instructional environment, intensity and duration are critical components to improve instruction for ELL and Non-ELL students who struggle with learning to read (Kamps et al., 2007).

Using a quasi-experimental design which consisted of students based on the type of tier 2 reading intervention received ELL versus English-only students; data were analyzed based on experimental and comparison group assignment. Two groups of elementary ELL and English-only students were included in the sample: (a) students at risk for reading failure and enrolled in secondary-level reading intervention, the focus of this analysis; and (b) students not at risk, and thus enrolled in the primary-level or core reading intervention only. To qualify as being enrolled in secondary-level intervention, the student had to receive intervention in the first and/or second grade.

The researchers examined the effects of a school-wide, three-tier intervention models. Participants were selected from 16 schools over a five period, 10 schools in the experimental

group and six schools in the comparison groups. Schools were randomly assigned using a stratified procedure: a.) ranking of schools by socio-economic status (SES) and b.) randomly selecting one from each pair as experimental or comparison. A total of 164 males and 154 females participated in the current study. Spanish was the primary language for 99 of the students, for the other 71; their primary languages included Somalian, Sudanese, and Vietnamese. Two groups of students were included in the sample: a.) students at risk for reading failure and enrolled in secondary-level reading intervention, the focus of this analysis; and b.) students not at risk, and thus enrolled in the primary-level or core reading intervention only. To qualify as being enrolled in secondary-level intervention, the student had to receive intervention in the first and/or second grade. The experimental group consisted of 117 students (84 ELL, 33 English-only) receiving tier-two interventions and the comparison group consisted of 113 (60 ELL, 53 English-only) (Kamps et al., 2007).

The experimental and comparison schools (three schools each) implemented tier-two interventions that varied in curricula and grouping size. The experimental schools implemented a direct instruction approach with three different curricula with a heavy focus on phonemic awareness including phonics instruction, and a pedagogical philosophy of teaching to mastery. When students developed literacy skills they transferred into small groups using a balanced literacy approach. In the experimental schools, direct instruction, small group interventions, and balanced literacy with grouping size of 3-7 students. The comparison schools used a balanced literacy approach for tier 1 and 2 reading instruction grouping size of 12 or more students.

Assessment measures were the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and the Woodcock Reading Mastery Test both given as pre- and posttests. Data was also collected for all students three times a school year (fall, winter, and spring) from two subtests, the Nonsense Word Fluency (NWF) and the Oral Reading Fluency (ORF). Fidelity

measures were taken throughout the study as well using checklists with questions regarding usage of procedures (as outlined in the scripted direct instruction), instructional features and pacing, instruction of early literacy skills within lessons, and management structure of learning behaviors. This data was also collected three times a year by two to three by research staff.

The researchers state that these findings show how a systematic curriculum is a vital component of effective interventions for ELL and non-ELL students who have reading difficulties (Kamps et al., 2007). The findings indicated greater outcomes for ELL students in the experimental schools, specifically those participating in tier 2 interventions using DI curriculum implemented in small groupings. All students in the six schools were included in the analysis of tier 1 only and those in tier 1 and 2 interventions. ELL students receiving DI over time indicated significant gain are limited and very general considering the complexity of the hypotheses, methods, selection of participants, procedures, and duration of the procedure, although small group, tier-two evidence based, long-term interventions, for at risk ELL students with reading difficulties, are shown to be most highly effective which in this study was DI. Direct Instruction interventions provide explicitly instructed sequences of skills within small groupings and had positive outcomes when group size was less than seven students. The researchers also note that, urban schools in the sample state that there are insufficient resources available to address both language and literacy instruction, considering the rapidly growing ELL population in large cities. Findings also support the use of the tiered model for early intervention at the primary level to enable at risk students to strengthen their comprehension skills to perform at grade level (Kamps et al., 2007).

Daily, explicitly focused, early literacy-skills-based interventions as well as ongoing professional development are extremely important for our ELL students whether or not they have reading difficulties. As professional classroom educators, teachers need to continually refine and

upgrade their practices in order to effectively serve our ELL student population. ELL students have continually scored low in national standardized assessments therefore educators need to continue to research best-practices and intervention methodology to serve all students.

Conclusion

The research provides validity for this case study when identifying a student's reading difficulties as soon as possible to implement effective interventions. This involves the teacher assessing a student's progress often providing data as evidence of successful interventions. This case study supports the research that most students with learning and/or reading difficulties, whether a native English speaker, or has limited English in their home, whose parents may be immigrants, and/or work more than the average eight hours per day being unable to consistently provide the academic support necessary for academic success need effective, explicit, balanced literacy instruction with on-going assessments to provide data needed to guide instruction. This study will show that word recognition activities with phonological awareness with common words and vocabulary with a spelling focus as well as fluency, writing, and reading comprehension will result in benefitting students with learning and reading difficulties.

Chapter Three: Procedures for the Study

This chapter describes the participant's strengths and weaknesses, academic achievement, as well as his family background. An explanation of the pre assessment results for the development of the intervention plan, a description of the intervention plan, and post assessment results used to analyze evidence of growth from the implementation of the intervention are included.

Description of the Participant

At the time of this case study, winter of 2012, the participant was Jose, a Hispanic, nine years and eight months old, fourth grade student of mine, the researcher, and attended a private, parochial, urban elementary school in the Midwest. As mentioned in chapter one, this urban elementary school qualified for free and reduced lunch program for approximately 97% immigrant enrolled students. Students enrolled in this private school are children of first or second generation immigrants, who are native, monolingual Spanish speaking parents. Jose had been the only child of a mother who raised Jose by herself for the first seven and a half years of his life. At the time of this study Jose had a stepfather and a fifteen month old baby brother. Spanish is spoken at home therefore Jose is considered an English Language Learner (ELL). He qualified for free and reduced lunch, as well as special educational services, Specific Learning Disabilities (SLD).

Jose is a thoughtful and dedicated student, although his academic stamina is low and is easily stressed when completing difficult tasks. He is a sensitive child and willing to please his teachers whenever possible. All academic tasks in all subjects at the fourth grade level are extremely difficult for Jose. During recess he plays with same-age peers that have similar maturity levels. At recess he often plays soccer with boys from his class. When he plays at home

he likes to play imaginative superhero, role playing activities with his cousins, friends or his fifteen month old little brother.

Jose's mother wanted to keep him in the private school even though special education services were not available at his school. Jose's private school was located within a public school district that provided special educational services to students enrolled in private schools within their district, therefore special educational services were provided to this private school's students who qualified for specific learning disabilities and speech therapy. The procedure for obtaining services for children who qualified was to put their name on a waiting list for a special education teacher to service students enrolled in private schools in their district. The waiting list had a substantial number of students on it.

The first year Jose attended the private school, as a third grade student, his mother signed the form for special educational services to be administered at the private school through the public school district's special education department from the public school nearest to the private school. Jose was put on the list, although he was not serviced. Jose's third grade classroom teacher serviced his learning needs through various interventions across the curriculum. The second year, his mother did not sign the form; therefore he was not put on the list. Again, during the year of the study his classroom teacher, the researcher, serviced his academic needs. Jose continues to struggle due to his SLD; with identified areas of weakness were limited retention and recall difficulties. According to Jose's IEP his general academic level is assessed at the first grade level. Jose demonstrated good effort at school although the work was always challenging at grade level. He comprehended written information at the first grade level, although oral information at a higher level. His academic strengths were his listening and math skills at the time of the study.

In summary, Jose has the motivation to improve his reading skills even though he has literacy word recognition impairments that hinder his reading development, he continued to stay

motivated and demonstrated excellent effort. The following sections of this chapter focus on the procedures used in this case study and collection of data.

Description of Procedures used for Data Collection and Intervention

Pre Assessments.

Initially, pre-assessments were administered over a ninety minute session to determine Jose's strengths and areas of weakness in reading. After scoring and evaluating the assessments, an intervention plan was developed.

Scoring of the assessments was then analyzed and an intervention plan was developed. The plan consisted of ten ninety minute sessions of instruction focusing on two areas: 1.) letter-sound recognition and development, and 2.) reading comprehension using primary story structure and expository texts to determine the sequence of simple events, with informal assessments and data collection obtained throughout each session. The case study was completed with using post-assessments and data to be evaluated. The following sections in this chapter describe the procedures and data collected in detail for this case study. A complete explanation and analysis of this case study is stated in chapter four.

The pre-assessments include the following: the Woodcock Reading Mastery Tests--Revised[™] (WRMT-R[™]) (Woodcock-Johnson, 1987) to analyze Jose's decoding skills and comprehension; the Qualitative Reading Inventory – 4 (QRI-4) (Leslie & Caldwell, 2005) to evaluate Jose's word identification, decoding and comprehension; and the Phonemic-Awareness Skills Screening (PASS) (Crumrine and Lonigan, 2000) to assess phonemic awareness. A detailed description of these assessments is described below.

The first pre-assessment was the Woodcock Reading Mastery Tests-Revised[™] (WRMT-R[™]) form H. This is an individually administered battery of tests with nationally standardized that measure basic reading achievement components. There is a basal rule where the student

continues until the six lowest-numbered items administered are scored as correct (or until the first page of the test is administered). Also, there is a ceiling rule where the student continues until six highest-numbered items administered are failed (or until the last page of the test has been administered). For each response to be scored correct, the student must produce a natural reading of the word in about five seconds. Students are not penalized for mispronunciations due to speech defects, dialects, or regional speech patterns (Woodcock-Johnson, 1987). The subtests:

- Word Identification (WI) require the student to identify isolated words while reading a graduated list of single words with a five second time limit per word
- Word Attack (WA) measures the student's ability to apply phonic and structural analysis skills to pronounce words that are not recognizable by sight
- Word Comprehension (WC) antonyms, synonyms, and analogies, measures the student's ability read and comprehend words at three levels of difficulty in cognitive processing as well as a measure of the student's comprehension in four areas of reading vocabulary
- Passage Comprehension (PC) measures the student's ability to comprehend a short reading passage and identify a key word missing from it.

For each blank, the student needs to supply a word that would be appropriate in the context of the passage (Woodcock-Johnson, 1987).

The second pre-assessment was the Qualitative Reading Inventory-4 (QRI-4) (Leslie & Caldwell, 2005). This is an informal reading inventory designed to yield diagnostic information about a student's ability to identify words, decode and comprehend. Word identification is measured in two ways on the QRI-4: 1) lists of high frequency words by grade level which the student reads aloud while timed for one second recognition, and 2) the percent of oral reading errors in the grade level passages. For the QRI-4, Jose read a list of words beginning at the

primer level. Jose had four errors on the primer word list indicating his instructional level is at the primer level with word recognition. His accuracy was assessed with words from the primer and first grade word lists. Then based on his scores from the word lists, he was given two timed-passages to read at the primer level. The first passage was a primer narrative passage and the second was an expository passage. After he read each passage he was asked to retell the passage as best as he could remember. Then, he was asked a series of implicit and explicit questions for each. Word recognition and comprehension instructional levels were both at the primer level. Errors were assessed and analyzed for the intervention plan.

Based on his Jose's scores on the word lists, in the second part of the QRI-4, Jose was given two primer level passages to read and respond to. The first passage was a narrative passage about a fox and a mouse. His responses to the content questions indicated that Jose was familiar with the topic. Jose read the passage orally so the miscues could be identified, recorded, and analyzed. Jose was asked to retell the events in the passage and was scored based on what he remembered from the text. Next, he was asked a series of implicit and explicit comprehension questions. The score was based on a combination of oral reading accuracy and the number of correct responses.

The second passage Jose was given was an expository passage about living and nonliving things. Based on his responses to the content questions, this topic was determined to be familiar to him. Just as Jose had done with the first passage, he also read the second passage orally. His miscues were recorded and analyzed to provide information about his reading strategies. He then retold the passage the best he could remember. His retelling was brief and excluded the main ideas. This contrasted with the retelling of the narrative passage which was more complete. Next, Jose was asked a series of implicit and explicit comprehension questions. Again, the score was based on a combination of oral reading accuracy and the number of correct responses.

The third pre-assessment was the Phonemic-Awareness Skills Screening (PASS) (Crumrine & Lonigan, 2000). The PASS assessed phonological awareness skills such as rhyming, sentence segmentation, blending, syllable segmentation, phoneme segmentation, phoneme isolation and phoneme deletion. It was divided into two individual sections for each skill. For the rhyming section, Jose was asked to identify which two of three words rhyme. He had to generate a word that rhymed with a specified word that was read aloud. The sentence segmentation section required Jose to indicate how many words were contained in a sentence after it had been read aloud. During the blending section, words were spoken aloud with pauses between syllables, onset-rimes, or phoneme. Jose had to then blend the word together. The syllable segmentation section required him to determine the number of syllables contained in a multi-syllable word that was read aloud to him. In the deletion section, he had to omit a certain segment of a word after a word was read aloud to him. The omitted segment was either a syllable, initial phoneme, or a final phoneme. The phoneme isolation section contained three parts: for the first part, Jose had to identify the initial phoneme; for the second part, he had to identify the final phoneme; and for the third part, he had to identify the middle phoneme. In the phoneme segmentation section, Jose had to repeat a word that was spoken aloud to him while pausing between each phoneme. The phoneme distribution was the last section; Jose had to replace a specified phoneme with a new phoneme after a word was spoken aloud to him. Jose received one point for each of the fifty possible responses that were correct. The score was his total correct responses divided by fifty.

The final pre-assessment was to obtain a writing sample. Jose was asked to write a paragraph about a favorite event with his family. According to the Student Writing Sample Assessment, Jose demonstrated strengths in Organization, Voice, and Word Choice at a Kindergarten to first grade level, and had more difficulty with Sentence Fluency and Conventions.

Based on the pre-assessments, an intervention plan was developed for the student. Given the pre-assessment results Jose was approximately two grade levels below his current grade level at the time of this case study. His most severe weakness was in word recognition therefore comprehension was very difficult for him.

Intervention.

Caldwell & Leslie (2005) suggest that in order for instructional intervention to be successful, a consistent lesson structure must be implemented. To improve Jose's literacy skills a balanced literacy structure was implemented in the areas of word study and comprehension, along with fluency and writing for reading comprehension, therefore a consistent format was used from lesson to lesson. The amount of time spent on each skill area was based on the amount of need. Caldwell & Leslie (2005) suggest that it is important to balance all components, but to spend more time on the areas with the greatest need.

There were two main objectives for the intervention plan: 1.) to improve Jose's word recognition skills by increasing his phonological awareness and orthography skills; and 2.) to improve Jose's reading comprehension through repeated readings, story structure, and written responses to reading through sequencing and summarizing story events. Given that Jose's weakness was decoding unfamiliar words and understanding that there are predictable patterns between sounds of spoken language, and letters represent sounds, Jose's decoding weakness had a direct effect on his comprehension. Each lesson incorporated activities in word study, fluency, comprehension, and writing to read. The plan consisted of ten, 90 minute sessions focusing on decoding words through intensive word study, and comprehension through the use of fluency, discussions, and writing activities. The researcher noted speech difficulties, overall performance including any difficulties as well as strengths while utilizing phonemic awareness skills during the

word study portion as well as utilizing comprehension skills. Data was collected during each intervention session using evidence from anecdotal records from oral or written activities.

Decoding instruction through word sorts, analogy, Elkonin boxes, and making words was the focus of each lesson. The data from the pre-assessments was analyzed to determine which letter-sound relationships was to be the focus of each lesson. Decoding instruction needs to include three effective techniques: 1.) systematic and explicit phonics, 2.) context, and 3.) structural analysis (Duffy, 2003). The lessons concentrated on the first two of these techniques: explicit phonics and context. Each lesson began first with practicing specific letter-sound associations. The majority of the letter-sound associations were beginning consonant sounds, consonant blends, medial vowels, digraphs, and onset-rime. A combination of decoding by analogy and word sorts was utilized to instruct phonics.

First, the researcher modeled reading the sound of the letter-sound relationship while pointing to the letters or letter combinations, and then Jose was asked to repeat the same sound. Next, the researcher would say a word, and then Jose would hold up a word card with the same sound. Then, he was asked to sort some of the word cards into columns based on the letter-sound relationships. After the researcher read the words in each column, the researcher would read more word cards. Jose had to decide the correct column in which these words belonged. Jose would then orally read down each column, reciting his thinking about the spelling pattern and pronunciation of the words. Next, new word cards containing the same letter-sound relationships were presented to Jose. Without the researcher pronouncing the word, Jose would place the word card into the correct column in which he believed the word belonged. The researcher modeled the strategy for the first few words. For example, "If t-a-m-e is tame, then s-a-m-e must be same." The researcher blended the sounds to pronounce it as a whole word. Jose then used this strategy to decode the new, unpronounced words. After Jose was able to decode the new words, the

researcher read a sentence written on a strip. Each sentence contained one of the words used in the previous activities. Jose would discuss why the word made sense in the sentence. This helped him to read the word in context and use context clues to try to decide unknown words. In time, Jose understood that it is easier to figure out an unknown word more quickly, instead of sounding out the word. Knowing that word recognition and fluency are directly related, it was easy to understand why Jose had difficulty to read fluently. It was important to improve his fluency skills because fluency provides a bridge between word recognition and comprehension (Armbruster et al., 2001). To initiate the fluency portion of the intervention sessions the researcher knew two methods would be most beneficial: echo reading, and repeated oral readings because Jose's decoding skills were very weak.

Jose's deficits in word recognition greatly impacted his reading comprehension. He struggled to retell stories in a sequential manner and identify the main idea of a text. Since comprehension is the motive and outcome for reading, the second part of the hypothesis, comprehension instruction, was a necessary component of each lesson. Furthermore, Jose's ability to retell stories events or expository information in a sequential manner as well as identify the main idea, sequencing techniques and concept webs were challenged. Prediction questions and strategies were always utilized before reading a text to promote a base for comprehension. Main events were written on sentence strips. Jose would then read the sentence strip aloud and place the strips in the correct order. Using concept webs assisted Jose in understanding the main idea and details of the text. Caldwell & Leslie, (2006) state "...retelling is a significant and natural component of good reading ... a student who knows the structure of stories may retell the passage in the order of a well-structured narrative (p. 23)." The lesson continued with Jose writing the story structure on a graphic organizer which provided a manner for Jose to improve retention of information learned in the session. Also, the researcher provided Jose with a sentence

prompt that pertained to the text read during the session. This provided Jose with an opportunity to have some background knowledge about the topic to assist him with retention and comprehension.

Lesson One.

After the pre-assessments were analyzed the intervention lessons were developed. Each ninety minute lesson involved explicit, balanced literacy instruction for use with: a word bank box, a personal word wall, see-it, say-it, spell-it, chant-it, trace-it for each sight Dolch sight words, Elkonin boxes (manipulatives for breaking words into sounds and putting sounds in order), and word sorts for decoding, shared and repeated readings of various genre at instructional level for fluency, discussing and writing important parts of the story with difficult vocabulary on sentence strips for comprehension, and then writing two sentences about the story or expository text in his journal for writing. At the beginning and end of all lessons a quick review, of the instructional components learned previously and currently, assisted Jose with recalling the goals of each lesson.

For lesson one, the word study objectives were for Jose to learn how to use the techniques mentioned for word recognition, specifically:

- phonemic awareness
- letter-sound associations
- alphabetically saying the sound for the letter (not the name of the letter)
- beginning consonant sounds
- consonant blend
- medial vowels
- digraphs

- onset-rime using Elkonin boxes (manipulatives for breaking words into sounds and putting sounds in order).
- precut, word sorts were explicitly introduced, modeled and Jose demonstrated his understanding by decoding by analogy using picture word sorts.

Next the researcher would repeat familiar words from the story aloud to Jose to observe whether he could repeat the word. Then the researcher segmented the sounds of the word. For example, dog - /d/ /o/ /g/ to see if Jose could repeat the word and segment it, again using Elkonin boxes. Spelling the word was not the focus for this lesson.

Following the word study portion of the lesson, the researcher began the fluency portion by modeling a read aloud to provide the opportunity for Jose to listen to fluent reading. The researcher would use her finger to show directionality and word placement on the page. Then after the modeled reading the researcher asked Jose to echo read the text.

The fluency portion of the lesson was the comprehension portion as well. Developing comprehension skills and strategies was the second crucial point of the hypothesis for this case study. The researcher asked Jose to identify the main idea looking back to the text was encouraged to find evidence from the text to support his answer. A graphic organizer, concept web, was used to write down the main idea and supporting details. Jose was to retell the text's main events in sequential order. The main events were written on sentence strips. Jose would then read the sentence strip aloud and place the strips in the correct order. The use of concept webs, sentence strips and cloze method sentences/paragraphs assisted Jose in understanding the main idea, details and the sequence of events of the text through writing. Therefore, the writing portion was used as a comprehension check of the text read for that lesson. Jose was asked to write two sentences about the main idea.

Lesson Two through Ten.

The rest of the intervention sessions with Jose transpired in much the same way as lesson one. The following chart describes the details of the remaining lessons and activities that took place.

Lesson Two	<p>Word Study: Demonstrated and utilized decoding phonemes using Elkonin boxes and by analogy, using picture sorts to determine letter-sound associations of the beginning sound of /b/, -at word families, short vowel sounds /a/, and recited the first 20 sight words on the preschool Dolch list put on personal word wall.</p> <p>Fluency: Modeled fluency using echo reading</p> <p>Comprehension: Utilized a concept web to understand the main idea and details of the text.</p> <p>Writing: Implemented the use of a picture from the reading, to prompt writing a sentence about the picture. Wrote two sentences using sight words and check spelling (informally).</p>
Lesson Three	<p>Word Study: Reviewed prior session's skills to check for retention, then demonstrated the use of decoding phonemes using Elkonin boxes for word families, and by analogy using picture word sorts to recognize hard and soft sound /c/, short vowel sounds /a/; and next 20 Dolch words from the preschool list</p> <p>Fluency: Modeled fluency using echo reading</p> <p>Comprehension: Utilized a concept web to understand the main idea and details using expository text</p> <p>Writing: Implemented writing main idea sentence strips from concept web, and checking spelling (informally).</p>

Lesson Four	<p>Word Study: Reviewed prior session's skills to check for retention, then demonstrated the use decoding phonemes using Elkonin boxes for word families, and by analogy using picture word sorts to recognize /d/ sound, short vowel sounds /a/, /e/ ; Dolch words from the Kindergarten list; and focus on spelling rules at the end of section.</p> <p>Fluency: shared reading</p> <p>Comprehension: discussion and graphic organizer, beginning, middle and end</p> <p>Writing: sentence strips from beginning, middle and end from graphic organizer</p>
Lesson Five	<p>Word Study: Reviewed prior session's skills to check for retention, then demonstrated the use decoding phonemes using Elkonin boxes for word families, and by analogy using word sorts beginning /f/ sounds; short /i/ sound; next 20 Dolch words from the Kindergarten list; and focus on spelling rules at the end section.</p> <p>Fluency: shared reading</p> <p>Comprehension: discussion and graphic organizer, beginning, middle and end</p> <p>Writing: Implemented writing main idea sentence strips from concept web and check spelling.</p>
Lesson Six	<p>Word Study: Reviewed prior session's skills to check for retention, then demonstrated the use decoding phonemes using Elkonin boxes for word families and new vocabulary from text; and by analogy using word sorts for beginning hard and soft /g/ sound; Dolch words from the next 20 on Kindergarten list; and focus on spelling rules</p> <p>Fluency: echo-reading</p> <p>Comprehension: discussion and graphic organizer, beginning, middle and end; and cloze method sentences</p> <p>Writing: Implemented writing main idea sentence strips from concept web.</p>

Lesson Seven	<p>Word Study: Reviewed prior session's skills to check for retention, then demonstrated the use decoding phonemes beginning blends using Elkonin boxes for word families and new vocabulary from text; by analogy using word sorts for beginning /k/ sound and short /o/ sound; Dolch words from the first 20 on the first grade list; and check spelling.</p> <p>Fluency: shared reading, then read aloud- student read independently</p> <p>Comprehension: discussion and graphic organizer, beginning, middle and end; and cloze sentences</p> <p>Writing: Implemented writing main idea sentence strips from concept web, and check spelling.</p>
Lesson Eight	<p>Word Study: Reviewed prior session's skills to check for retention, then demonstrated the use decoding phonemes beginning sounds using Elkonin boxes for word families and beginning /m/ sound; by analogy using word sorts short /u/ sound; next 20 Dolch words from the first grade list: and check spelling.</p> <p>Fluency: shared reading, then read aloud- student read independently</p> <p>Comprehension: discussion and graphic organizer, beginning, middle and end, cloze sentences</p> <p>Writing: sequencing main events and check spelling.</p>
Lesson Nine	<p>Word Study: Reviewed prior session's skills to check for retention, then demonstrated the use decoding phonemes using Elkonin boxes for words from text, and by analogy using word sorts for the beginning /n/ sound and the short /a/, /e/, /i/, /o/, and /u/ sounds in words; the next 20 Dolch words from the first grade list; and check spelling.</p> <p>Fluency: shared reading, then read aloud-student read independently</p> <p>Comprehension: discussion and sentence strips, beginning, middle and end; and cloze</p>

	sentences Writing: main idea and events; check spelling
Lesson Ten	Word Study: Reviewed prior session's skills to check for retention, then demonstrated the use decoding phonemes using Elkonin boxes for words from text, and by analogy using word sorts for beginning sounds /s/, /t/ and /w/ and long vowel sounds /a/, /e/, /i/, /o/, and /u/; the first 20 Dolch words from the second grade list; and check spelling. Fluency: student read aloud, independently Comprehension: discussion and graphic organizer, beginning, middle and end; and cloze paragraph Writing: Student writes about the text in his own words (beginning, middle, and end)

Post Assessments.

After the ten, ninety minute intervention sessions, Jose was given a series of post assessments during one ninety minute session in order to measure the growth that may have occurred during the case study. The post-assessments include the same battery of assessment used as pre-assessments. The first post-assessment was the Woodcock Reading Mastery Tests-- Revised^{nu} (WRMT-R^{nu}) to measure analyze Jose's decoding skills and comprehension form G ; the Qualitative Reading Inventory – 4 (QRI-4) (Leslie & Caldwell, 2005) to evaluate Jose's word identification, decoding and comprehension; and solve unknown words in reading, and the Phonemic-Awareness Skills Screening (PASS) (Crumrine and Lonigan, 2000) to assess phonemic awareness.

The first post- assessment was the Woodcock Reading Mastery Tests-Revised^{nu} (WRMT-R^{nu}) form G. This is an individually administered battery of tests with nationally standardized norms which measure basic reading achievement components. There is a basal rule where the

student continues until the six lowest-numbered items administered are scored as correct (or until the first page of the test is administered). Also, there is a ceiling rule where the student continues until six highest-numbered items administered are failed (or until the last page of the test has been administered). For each response to be scored correct, the student must produce a natural reading of the word in about five seconds. Students are not penalized for mispronunciations due to speech defects, dialects, or regional speech patterns (Woodcock-Johnson, 1987). The subtests were the same as mentioned for the pre-assessments: WI, WA, WC, and PC (Woodcock-Johnson, 1987). Please refer to the list for clarification.

The second post-assessment was the Qualitative Reading Inventory-4 (QRI-4) (Leslie & Caldwell, 2005). This is an informal reading inventory designed to yield diagnostic information about a student's ability to identify words, decode and comprehend. Word identification is measured in two ways on the QRI-4: 1) lists of high frequency words by grade level which the student reads aloud while timed for one second recognition, and 2) the percent of oral reading errors in the grade level passages. For the QRI-4, Jose read a list of words beginning at the primer level. His accuracy was assessed with words from the primer and first grade word lists. The first passage was a first grade level narrative passage and the second was an expository passage. After he read each passage he was asked to retell the passage as best as he could remember. Then, he was asked a series of implicit and explicit questions for each. Word recognition and comprehension instructional levels were both at the first grade level. His responses to the content questions indicated that Jose was familiar with the topic. Jose read the passage orally so the miscues could be identified, recorded, and analyzed. Jose was asked to retell the events in the passage and was scored based on what he remembered from the text. Next, he was asked a series of implicit and explicit comprehension questions. The score was based on a combination of oral reading accuracy and the number of correct responses.

The second passage Jose was given was an expository passage. Based on his responses to the content questions, this topic was determined to be familiar to him. Just as Jose had done with the first passage, he also read the second passage orally. His miscues were recorded and analyzed to provide information about his reading strategies. He then retold the passage the best he could remember. His retelling was brief and excluded the main ideas. Again, this contrasted with the retelling of the narrative passage which was more complete. Next, Jose was asked a series of implicit and explicit comprehension questions. Again, the score was based on a combination of oral reading accuracy and the number of correct responses.

The third post-assessment was the Phonemic-Awareness Skills Screening (PASS) (Crumrine & Lonigan, 2000). The PASS assessed phonological awareness skills such as rhyming, sentence segmentation, blending, syllable segmentation, phoneme segmentation, phoneme isolation and phoneme deletion. It was divided into two individual sections for each skill. This assessment was administered and scored in the same way as the pre-assessment.

The final post-assessment was the writing sample, I asked Jose to write a paragraph about a favorite even of the school year. According to the Student Writing Sample Assessment, Jose demonstrated strengths in organization, voice, and word choice at the first grade level, although had continued difficulty with sentence fluency and conventions.

In summary, the procedures for this case study were the pre-assessments, an intervention plan that was created based on the pre-assessment data and knowledge of Jose's interests, the lessons were developed and executed, and the post-assessment data. Data was also collected through the ten intervention sessions of instruction. The researcher noted Jose's performance and the application of word recognition skills and comprehension skills and strategies in context by recording her observations through the use of anecdotal records from the oral and written

activities. The data was analyzed for the development of the intervention plan used in this study as well as for ongoing intervention recommendations.

Conclusion

This chapter described the methods used to collect data for this case study. There was a detailed description of Jose, the student in this case study, including his academic background. The procedures used in this case study were described, followed by a description of how the data was collected. Chapter four will discuss the results of the pre-assessments, the development and implementation of a tier three intervention plan, and results of the post assessments. A comprehensive explanation and analysis of the data is found in chapter four and illustrated in the appendix, Tables 1-8.

Chapter Four: Results

This chapter describes the case study method, participant, results of the pre-assessments, literacy skills and strategies developed and implemented for the intervention plan, and post assessment results. The description of the intervention plan and sessions is detailed in chapter three. Data obtained from the pre-and post- assessments, analysis of the data, and how the results guided the development of the intervention is described in the tables. Tables are provided in Appendix A, Tables 1-8 to assist the reader in viewing the data in a more concise manner.

Pre Assessment Data

Jose had reading difficulties and specific learning disabilities for many years. As explained in chapter one, Jose has qualified Specific Learning Disabilities (SLD) although did not receive services at the parochial school he attended. Jose has difficulty retaining new information without several opportunities to practice the skill that is needed for retention. Throughout the assessments and interventions, Jose was willing to do his best while learning new strategies and skills to apply to a new text that was easy for him read. Again, it is important to note Jose's learning strengths: strong listening skills, oral vocabulary, logical reasoning, effective use of context clues for decoding, determination, and positive peer and adult relationships. He was aware of his difficulties and was very shy about asking for help. He would try the activity but would hesitate if he thought he could be wrong. He would look at the researcher for clues on how to proceed to get it right.

To gain sufficient information about Jose's phonological awareness, decoding, fluency, comprehension and writing abilities, it was necessary to administer essential assessments to provide adequate information for analysis, and to develop an effective and thorough intervention plan.

Jose was given a number of formal and informal pre- assessments. As the researcher initiated the assessments Jose was very hesitant, talked softly, and appeared to have low confidence. At times the researcher found that it was difficult to hear Jose and had to ask him to repeat his answer, or speak louder. As Jose understood the testing process he became more confident and spoke with a natural voice.

The entire battery of WRMT-R^{nu} (form H) standardized pre-assessments was administered in three sessions due to Jose's stamina during these assessments. The first pre assessment was the Woodcock Reading Mastery Tests--Revised^{nu} (WRMT-R^{nu}) form H (Woodcock-Johnson, 1987). The researcher began with the Word Identification (WI) section which required the participant to identify isolated words while reading a graduated list of single words with a five second time limit per word. The results considered were for three categories of analysis: 1.) the Grade Equivalent (GE) and the results indicated he was about two levels below grade level, 2.) the Percentile Rank (PR) was in the below average level range, and 3.) Standard Score (SS) was in the below level range as well.

For the Word Identification (WI) and the Word Attack (WA) components, the data was as follows: WI - GE: 2.3 approximately two levels below his level of 4.4, PR: 15 and SS: 85 (Appendix, Table 1). For the WA Jose's scores for the GE: 1.8, PR: 15 and SS: 84 (Appendix, Table 2). Indicating his decoding needs were significantly below grade level, and at the tier three intervention levels.

The PASS assessment had six categories. Jose's percentages were: 1.) Rhyme: 67%, 2.) Sentence Segmentation: 20%, 3.) Blending: 43%, 4.) Syllable Segmentation: 60%, 5.) Deletion: 50%, and 6.) Phonemic Isolation: 56% (Appendix, Table 3). These scores indicate an average need for a primary level student.

The QRI-4 results demonstrated similar findings. Jose scored at the primer level: automatic-70% and total-80%, indicating this was his instructional level, and for the level one words: automatic-45%, and total- 60% indicating this was his frustration level (Appendix, Table 4). Given his age and overall difficulties with letter sounds, blending, deletion, phoneme isolation, segmentation and substitution, Jose would need tier three word recognition skills intervention.

The WRMT-R^{nu} word comprehension section identifies the level of vocabulary comprehension in context. Jose's GE: 2.0, PR: 7, and SS: 77 scores demonstrated significant difficulty sounding out words (Appendix, Table 5). Jose missed many initial, middle and ending vowel and consonant sounds as well as digraphs and diphthongs. It was apparent from these results that Jose had difficulty remembering the rules for decoding words. When asked to think about letter sounds and to manipulate the sounds in a specific way Jose became confused and frustrated. He tried with his best effort although had much difficulty.

The results of the pre-assessments for the WRMT-R WI, WA, WC, QRI-4, and PASS measuring phonemic awareness and decoding skills demonstrated a significant weakness in word recognition ability and vocabulary comprehension.

For the WRMT-R^{nu} passage comprehension the GE: 2.3, PR: 16, and SS: 85 (Appendix, Table 7). Analyzing his GE score, it indicates that Jose requires tier three interventions for comprehension. As mentioned in chapter three, this subtest measures ability to comprehend a short reading passage and identify a key word missing from it.

Throughout the QRI-4 fluency (Appendix A, Table 6) and comprehension (Appendix, Table 8) pre assessments (Jose was given a primer narrative text *Fox and Mouse* receiving a score of 40 CWPM (corrected word per min) with an accuracy score of 8 miscues (Appendix, Table 6). *Fox and Mouse* was familiar to him; his retelling scores were 35%, and implicit and

explicit questions/answers were 5/6: 83%, indicating the instructional level (Appendix, Table 8). In addition, he was given a primer expository text *Living and Non Living* receiving a score of 48 CWPM with accuracy score of 5 miscues (Appendix, Table 6). *Living and Non Living* was also familiar to him; his retelling score was 25%, and implicit and explicit questions/answers score was 4/6: 67%, indicating the instructional level (Appendix, Table 8).

The detailed scores concerning Jose's performance on the WRMT-R^{nu} subtests, the PASS and QRI-4 assessments demonstrated a literacy weakness at the mid primary level when measuring decoding, phonemic and phonic abilities, indicating a severe need in high frequency word recognition and comprehension skills and strategies.

The intervention plan for word recognition had to be intensive and systematic with a consistent review at the beginning and end of each lesson as well as an emphasis on recall, fluency and comprehension.

Intervention

As noted, Jose had significant delays in word recognition and retention. The researcher developed Jose's tier three interventions. Therefore, the plan needed to be 45% word recognition, 25% reading fluency, and 30% retelling text oral and written comprehension activities for each ninety minute session. This aligns with the balanced-literacy instruction format based on his weaknesses (Caldwell & Leslie, 2009; Leach, Scarborough & Rescoria, 2003). Although Jose's stamina to have one-to-one tutoring session was low, he was motivated to begin working on the necessary skills and strategies that would help him improve his ability to sound out words and understand the meaning of words in context to advance his overall reading comprehension and improve his endurance to consistently work at improving his word recognition and overall comprehension.

The detailed scores and observations of word recognition assessments: WRMT-R^{nu}, PASS, and QRI-4 (Appendix), indicated a similar pattern to his limited recognition of high frequency word patterns. In addition, Jose's pre assessment scores demonstrated his inability to apply decoding principles efficiently, which is hindered by both: 1.) limited knowledge or recollection of vowel digraph patterns as indicated by the WRMT-R-WA and his PASS assessment scores, and 2.) limited recall and efficiency when applying decoding skills.

Jose's word recognition pre assessment results, as summarized above, indicated that his greatest needs (tier three) were in the word identification, word attack, then fluency, and comprehension. Therefore, the intervention plan emphasized foundational phonological awareness (rhyming, syllable and phoneme segmenting, phoneme substitution, and deletion); sequenced word recognition phonic skills at the cvc, ccvc level; high frequency words beginning with the pre-primer level; word recognition strategies; fluency with word parts, basic pre-primer sentence structure and passage level; sequential retelling stressing story elements and writing answers to comprehension questions.

During initial intervention sessions, Jose tended to be very timid and hesitant. It appeared to the researcher given the manner in which he asked affirming type of questions, eye contact, and hesitation that he did not want to give a wrong answer. He would try the activity but would hesitate if he thought he could be wrong. He would look at the researcher for clues on how to proceed to get it right. The researcher stayed objective and gave support as needed without prompting and/or leading Jose toward any answer. The researcher used explicit modeling before Jose was expected to give independent answers. Homework was initially a component of the intervention plan. Although, when he was working on his literacy assignments at home along with his other classroom homework as well as the difficulties his mother had with follow-through,

the researcher decided to focus only on the consistent practice and completed activities during the intervention sessions for evaluation and planning.

The initial intervention plan began with the strategies used for tier three, explicit modeling interventions in phonological awareness. The strategies were: using sound chart and Elkonin boxes (manipulatives for breaking words into letter and consonant blend sounds and putting sounds in order), while reciting at the most 15 words from the Dolch word list beginning at the primer level and words with common phonetic elements.

For lesson one, the word study objective was to learn how to use the techniques mentioned for word recognition, specifically:

- phonemic awareness
- letter-sound associations
- alphabetically saying the sound for the letter (not the name of the letter),
- beginning consonant sounds
- consonant blend
- medial vowels and digraphs
- onset-rime using Elkonin boxes (manipulatives for breaking words into sounds and putting sounds in order)

The researcher began with the Dolch list at the primer level and stopped when Jose missed a word. The list of words was reviewed on cards during the next few lessons until he had mastery recall of all unknown words. Also, word recognition practice involved vocabulary from difficult words from the story read aloud to Jose. The researcher observed whether Jose could repeat the word. Then the researcher segmented the sounds of the word. For example, dog - /d/ /o/ /g/ to see if Jose could repeat the word and segment it, using Elkonin boxes. Jose understood and remembered the procedure. Word sorts that supported the sounds used with the Elkonin boxes were used. Spelling the word was not the focus for this lesson, although spelling skills were utilized in subsequent lessons to promote letter/sound correspondence when writing (Snow, Griffin & Burns, 2005; Spear-Swerling, 2001).

Following the word study portion of the lesson, the researcher began the vocabulary and fluency portion of the intervention session. For vocabulary comprehension the researcher utilized the Frayer model and the Cloze procedure to comprehend new vocabulary in context. Fluency was practiced by using the read aloud technique to model proper fluency. Jose listened to fluent reading. The researcher modeled the appropriate voice and finger placement to show directionality and word placement on the page. Then after the modeled reading the researcher asked Jose to read a pre-primer leveled story for a baseline running record score for fluency. Then the researcher continued with echo reading (researcher reads a sentence then the participant reads what the researcher has read and so on) with a primer level text. After Jose independently read this text for fluency, the researcher again maintained a running record for the entire text for a sound baseline score. For the first few lessons echo reading was used to encourage fluency. After letter/sound/word recognition skills and fluency practice, the researcher worked with Jose to develop comprehension skills and strategies using graphic organizers.

The researcher asked Jose to identify the main idea of the echo read text. Looking back to the text to find evidence from the text to support his answer was encouraged. In addition, Jose was to retell the text's main events in sequential order while placing the number of the sequenced event next to the item on the graphic organizer. A "concept web" graphic organizer was used to write down the main idea and main events, with assistance. Next, the main events were written on sentence strips from the information written on the graphic organizer, again with assistance from the researcher. Jose would then read the sentence strip aloud and place the strips in the correct order. The use of concept webs and sentence strips assisted Jose in understanding the main idea and the sequence of events of the text through the use of his writing skills. Therefore, the writing portion was used as a comprehension check of the text read for that lesson.

Throughout the case study intervention sessions Jose continued to use word recognition and comprehension skills and strategies. He exhibited more confidence with sounding out unfamiliar words while comprehending the main idea, characters and events of the stories. As the intervention sessions continued, Jose was asked to think about letter sounds and to manipulate the sounds in a specific way Jose . As he tried to sound out two syllable words and he had more difficulty. While his post assessment scores demonstrated an improvement in his word recognition and comprehension skills and strategies, Jose continued to read below his grade level.

Post Assessments Data

Jose appeared to have more confidence and stamina while working on the battery of post assessments. His voice, posture and eye contact demonstrated a positive and confident performance throughout the post assessment sessions. Even though his overall behavior was more confident and positive, Jose had difficulty as he proceeded through the sections of the assessments. Again, it is important to note Jose's learning strengths: strong listening skills, oral vocabulary, logical reasoning, and effective use of context clues for decoding as well as determination and positive disposition. Jose was constantly aware of his difficulties.

To gain sufficient information about Jose's phonological awareness, decoding, fluency, comprehension and writing abilities, it was necessary to administer essential post assessments to provide adequate information for analysis, and determine whether the intervention plan was effective.

Jose was given a number of formal and informal post assessments. The first post assessment was the Woodcock Reading Mastery Tests--Revised^{nu} (WRMT-R^{nu}) form G (Woodcock-Johnson, 1987). Tables of the pre and post assessment data, analysis, and interventions are in Appendix A, Table1-8 to clearly view his gains. For the WI, the GE: 2.5 approximately two levels below his level of 4.4, with a PR: 19 and a SS: 87 (Appendix, Table 1),

the improvement was insignificant. The next section of the WRMT-R^{nu} was the word attack (WA), Jose's scores were: GE: 2.5 below grade level, with a PR: 19 and a SS: 87 (Appendix, Table 2). Scores indicated a significant improvement in his decoding skills although continue to be below grade level.

The PASS assessment had six categories. 1.) Rhyme: 83%, 2.) Sentence Segmentation: 60%, 3.) Blending: 71%, 4.) Syllable Segmentation: 80%, 5.) Deletion: 83%, and 6.) Phonemic Isolation: 87% (Appendix, Table 3). These scores indicated an improvement in retention of basic phonemic awareness skills.

The QRI-4 results demonstrated similar findings (Appendix, Table 4). Jose was given the same words and percentages were at the primer level: automatic-85% and total-95%, indicating this was his independent level. In addition, level one word's percentages were: automatic-85%, and total- 90% indicating this was his instructional level. Finally, level two word's percentages were: automatic-45% and total 50% indicated this was his frustration level (Appendix, Table 4). Given his age and overall difficulties with letter sounds, blending, deletion, phoneme isolation, segmentation and substitution, Jose would continue to need tier three word recognition skills intervention.

Jose's post assessments results indicate a need to continue to receive tier three word-work interventions due to his scores in the of the WRMT-R^{nu} word identification and word attack sections, the PASS six categories, and QRI-4 word lists.

The WRMT-R^{nu} word comprehension section identifies the level of vocabulary comprehension in context. Jose's GE: 3.2, PR: 24, and SS: 89 (Appendix, Table 5). scores demonstrated significant improvement after the intervention although he continues to have difficulty sounding out words he does not know because of his weak oral receptive vocabulary and decoding skills.

The results of the post-assessments for the WRMT-R WI, WA, WC, QRI-4, and PASS measuring phonemic awareness and decoding skills demonstrated a continued significant weakness in these areas.

Throughout the QRI-4 oral reading rates for fluency (Appendix, Table 6) and comprehension (Appendix, Table 8) post assessments Jose was given a primer narrative text *The Pig Who Learned to Read* receiving a fluency score of 60 CWPM (corrected word per min) (Appendix, Table 6) with an accuracy score of 3 miscues. For retelling and comprehension, *The Pig Who Learned to Read* was familiar to him, although his retelling score was 46%, the implicit and explicit questions/answers score 6/6: 100% indicated an independent level (Appendix, Table, 8). The primer expository text *Who Lives Near Lakes?* the score of 62 CWPM (Appendix, Table 6) with an accuracy score of 1 miscue. *Who Lives Near Lakes?* was familiar to him his scores for retelling 50%, the implicit and explicit question/answer score was 6/6: 100% indicated an independent level. Then, Jose was given narrative and expository passages at level one. The narrative text was *The Bear and the Rabbit*, with 48 CWPM with accuracy of 10 miscues (Appendix, Table 6), was familiar with a retelling score of 41%, implicit and explicit questions/answers 4/6: 67%, the instructional level (Appendix, Table 8). In addition, level one expository text was *Air*, with 55 CWPM with accuracy of 5 miscues (Appendix, Table 6) was familiar with a retelling score of 25%, implicit and explicit questions/answers 4/6: 67%, the instructional level. Jose is reading one level higher than before the intervention. His scores show significant improvement for the duration of the intervention.

For the WRMT-R^{nu} passage comprehension the GE: 2.5, PR: 18, and SS: 86. The detailed scores concerning Jose's performance on the WRMT-R^{nu} subtests, PASS and QRI-4 assessments demonstrated a weakness at the mid primary level when measuring decoding, phonemic and phonic abilities, vocabulary strength and an overall weakness in reading

comprehension. However, his post assessment scores indicate mild improvement at his ability level.

Conclusion

The pre assessments' results indicated Jose's literacy ability was significantly below grade level. The researcher implemented a tier three intervention plan focusing on word recognition and comprehension skills and strategies. Intervention sessions were ninety minutes, once a week for twelve weeks including assessment sessions. Jose displayed a commitment to do his best, and his stamina increased as the intervention sessions proceeded over time. The intervention was successful although the post assessments' data results revealed only a small increase in his word recognition and reading comprehension abilities, although he improved about one grade level overall. The final chapter discusses current research and how it relates to this case study's hypothesis, methods, procedures, and data results as well as opinions and recommendations concerning the hypothesis and data results.

Chapter Five: Conclusions

The purpose of this case study was to determine if the implementation of word recognition and reading comprehension skills and strategies would help an ELL fourth grade student with LD improve his overall literacy ability. The research question was, “Will explicit instruction via tier 3 interventions for word recognition and reading comprehension skills and strategies improve literacy ability for a student with reading difficulties and specific learning disability?” The intervention consisted of ninety minute sessions once a week for ten weeks. As mentioned in previous chapters, while implementing systematic, balanced-literacy interventions the participant worked on word recognition skills such as phonemic awareness skills using letter/sound relationship activities, sight words, word families, then vocabulary comprehension activities, fluency, writing, and reading comprehension skills and strategies with the goal of improving his word recognition and reading comprehension ability.

In the previous chapter, I discussed the data from the pre, post, and intervention assessments, for the twelve week period. This chapter discusses the study’s results of the assessments and interventions, its strengths and limitations as well as recommendations for further interventions both at home and school use explicit, balanced-literacy format to improve word recognition and reading comprehension through the lens of existing research literature. A discussion including the study’s connection to Wisconsin State Content Standards and state law as it connects to the recommendations for the participant of this study.

Connections of Results to Existing Research

The results of the pre and post assessments indicated that the interventions provided some progress in Jose’s overall literacy skills. The interventions consisted of ninety minute sessions over ten weeks not including assessment sessions. The pre and post assessments were implemented over two ninety minute sessions; one at the beginning and one at the end of the

interventions. The interventions began with instruction to listen to the read aloud, and think about the story's main idea. The researcher used verbal expression to demonstrate fluency thereby preparing the participant for word recognition activities. The participant had difficulty remembering phonological awareness rules such as remembering the letter/sound correspondence rules; a significant amount of time of each intervention session was devoted to letter/sound activities.

Initially, the words were used in sentences created and read by the participant with assistance from the researcher. Explicit, balanced-literacy instruction, on-going assessments, and the collection of data is necessary for students' academic achievement especially those who have reading difficulties; this is the premise for implementing effective literacy instruction (Brown, Pressley, Van Meter, & Schuder, 1996).

I examined the participant's phonological awareness skills by using the WRMT-R^{nu} (Woodcock-Johnson, 1987), a standardized assessment data for word identification and word attack skills, including consonant blends, diphthongs, and digraphs. The data for these pre and post assessments' results indicate a significant need for intervention focusing on phonological awareness skills and strategies for continued interventions. The data shows that for Word Identification (WI): there was a +.2 point gain in the Grade Equivalent (GE) (Appendix A, Table 1) which is minimal and may show that the participant continues to lack confidence and feels uncertain when faced with a time limit for identifying words. With the Word Attack (WA): a + .7 point gain in the GE (Appendix A, Table 2) which shows minimal progress with word attack skills than the word identification meaning that the interventions used, explicit modeling and systematic practice of phonological awareness activities had an impact on the participant's retention of these word study skills (Leslie & Caldwell, 2006; Ehri & Rosenthal, 2007). Jose

continues to have difficulty with word identification although he is using skills and strategies learned to sound out words (Wanzek & Roberts, 2012).

An examination of the pre and post assessments' results of the PASS (Appendix A, Table 3) which assessed the rhyme, sentence segmentation, blending, syllable segmentation, deletion, and phoneme isolation, indicated a significant improvement with sentence segmentation and blending as well as an overall improvement in all areas, suggesting retention of phonological awareness rules (Ehri & Rosenthal, 2007).

In addition, an analysis of QRI-4 (Appendix A, figure 4) pre and post word list assessments' data indicate an improvement from the primer level with an automaticity score of 70% to 85% and for level one the scores went from 45% to 85% indicating level one is the instructional level. The participant went from the primer instructional level to level one instructional level indicating improvement although some difficulty with short and final silent *e*, minimal *b-d* reversal, long sounding vowels with silent *e*, some weaknesses with middle and ending consonant blends, digraphs and diphthongs, and slight difficulty with */gh/* and middle */th/*. Therefore, an intervention plan including word recognition was intensive for Jose, because this was his most severe weakness (Leslie & Caldwell, 2006).

When developing tier two or three interventions for students with reading difficulties implementing word recognition and comprehension skills and strategies is vital through the explicit modeling and balanced-literacy method. Wanzek and Roberts (2012) hypothesized that matching the emphasis of instruction to the students' needs (word recognition or comprehension) may enhance outcomes for students with reading disabilities in the upper elementary grades. Daily, explicitly focused, early literacy-skills-based interventions as well as ongoing professional development are extremely important for our ELL students whether or not they have reading difficulties. Students with literacy difficulties need to utilize word recognition skills and

strategies along with comprehension skills and strategies to cohesively strengthen their total comprehension (Kamps et al., 2007). The research reviewed in chapter two suggests that when young students display literacy difficulties in the primary level, ongoing assessments and early intervention are necessary to provide opportunities to remedy reading difficulties. The use of the tiered model for early intervention at the primary level to enable at risk students to strengthen their comprehension skills to perform at grade level is necessary for their literacy foundation before they enter the intermediate grades (Kamps et al., 2007).

For vocabulary, an analysis of the WRMT-R^{nu} data illustrated a significant improvement of one grade level from 2.0 to a 3.2 representing a +1.2 gain in vocabulary comprehension. The intervention used for this literacy component included a preview of difficult vocabulary from the text and the use of pronunciation guides, Elkonin boxes, phonetic patterns, focus on spelling, Frayer method and the cloze model for investigating comprehension of vocabulary studied. This is an improvement although he continues to have difficulty decoding one and two syllable words at grade level.

An examination of fluency, the QRI-4 (Appendix, Table 6) pre assessment results indicated the instructional level at the primer level for the narrative: 40 CWPM, and expository: 48 CWPM. While using different narrative and expository texts for post assessments, the data indicated at the primer level narrative: 60 CWPM and expository: 62 CWPM – independent level and further post assessments in oral reading for the QRI-4 showed progress to level one: instructional level data showed narrative: 48 CWPM and expository: 55 CWPM. An analysis of this data demonstrates using both narrative and expository texts during the intervention for read alouds, independent reading, and echo reading strategies provided the necessary explicit instruction and modeling the fluency the participant needed to improve his fluency skills to level one.

Finally, concerning comprehension, the WRMT-R^{nu} pre and post formal assessment data (Appendix, Table 7) demonstrate a slight improvement pre assessment data for GE: 2.3 and post data 2.5. For the QRI-4 pre assessments' data show that the narrative text at the primer level the retelling: 35% and questions: 83%; expository retelling: 25%, and questions: 67% (Appendix, Table 8) indicating pre assessment data for narrative and expository comprehension at the primer level was at the instructional level. For the QRI-4 comprehension post assessments (Appendix, Table 8), the participant read different text than for the pre assessments. The post assessments' data show that the primer level for both types of texts were at the independent level, narrative retelling: 46%, and questions: 100%; expository retelling: 50% and questions: 100%. At level one, the narrative text data show that retelling: 41%, and questions: 67%, and the expository text retelling: 25% and questions: 67% at the instructional level. The participant gained one level with both types of texts.

After orally retelling the important events or information from the text read during the session, the researcher assisted the participant with skills and strategies to recall important information from the text as well consistent practice with looking for the main idea, important events, and sequencing the events, then the researcher implemented writing activities using story structure, graphic organizer, and utilized the cloze method sentence or paragraph that was taken from the text used for the session. The struggling reader participant made significant improvements in reading comprehension after receiving a systematic, explicit intervention (Mahapatra et al., 2010).

Connections to Wisconsin State Standards

Wisconsin's fourth grade English Language Arts Standards are as follows: A.4.1 Use effective reading strategies to achieve their purposes in reading; A.4.2 Read, interpret, and

critically analyze literature; A.4.3 Read and discuss literary and nonliterary texts in order to understand human experience; and A.4.4 Read to acquire information.

This case study research is connected to the following fourth grade Wisconsin Content Standards in English Language in Reading a.) *A.4.1 Use effective reading strategies to achieve the student's purpose in reading;* b.) *A.4.2 Read, interpret, and critically analyze literature.;* c.) *A.4.3 Read and discuss literary and nonliterary texts in order to understand human experience;* and d.) *A.4.4 Read to acquire information.* The implementation of effective, systematic, decoding strategies to increase the participant's phonological awareness and phonics skills to improve his word recognition in easy and somewhat challenging texts the participant used effective reading strategies to improve his word recognition and comprehension skills and strategies. Through the implementation of phonological awareness activities, activating prior knowledge, sequence events, applied inference skills in various texts, the participant was able to interpret and analyze texts improve the way he reads. By discussing and utilizing methods to identify and summarize main ideas and key points from literature, and informational texts the participant had opportunities to distinguish fiction from nonfiction, through the use concept webs and numerous other methods.

Connections to Special Education Law

As the researcher of this study, I looked at the Specific Learning Disabilities that were addressed in Jose's IEP. His weaknesses are: limited retention of basic phonological awareness literacy skills, oral and written expression, fluency, and reading comprehension. Jose qualified for SLD services although did not receive services because his mother did not sign the form for Jose to receive services at the private, parochial school. Even though he was not served as a student with special needs at the private school, his former teachers and I continually assessed and

provided adaptations to the standards and curriculum where needed as stated in the special provisions section of the IDEA Act.

Jose's IEP was evaluated as a basis for developing the procedural plan for this study. The IDEA Act and No Child Left Behind (NCLB) state that certain factors are necessary for successful performance outcomes of special education students such as parent involvement, continual assessments to evaluate student's improvement or not, implement Response to Interventions (RtI), and provide a least restrictive learning environment. This will help to ensure the student receives and has access to research-based, best-practices instruction which will improve a SLD student's academic success.

Strengths and Limitations

This case study had several strengths. The explicit modeling, systematic, balanced-literacy instruction enabled the researcher to effectively implement the necessary components that the data suggested needed intervention. The ninety minute sessions provided the extended time needed to efficiently cover all areas to improve literacy such as: word study, vocabulary, fluency, writing and reading comprehension. Brown, Pressley, Van Meter, and Schuder (1996) discussed how students should become more self-reliant as demonstrated in the SAIL study, although given the rigorous implementation of this study's sessions it left little time to demonstrate self-reliant techniques. Although, Jose was offered choices when making various decisions about text choice or choosing an activity, he needed more opportunities to become more self-directed and use self-assessment techniques.

One initial limitation to this study was that it was difficult to find prior data on this student before he was referred for an IEP. Another was the duration of the intervention. Considering his weaknesses in word recognition it was difficult to move ahead with comprehension skills and

strategies. If the intervention was throughout the school year (nine months instead of three months) there may have been greater gains.

Recommendations for Home and School

Given the state standards and law, a consistent, systematic, balanced-literacy intervention plan is necessary to increase Jose's success in the following areas of literacy: phonological awareness, word study, fluency, writing, and comprehension. These are my recommendations:

1. **Phonemic Decoding:** Jose should continue to segment and blend phonemes in common vowel syllable patterns (cvc-short vowels, digraphs th, sh; silent e, vowel team/talkers, and apply that knowledge to the decoding of unfamiliar words) through sound boards, Elkonin boxes, making words, word sorts, and decodables to become more phonemically aware. This should also increase his ability to add and delete phonemes from words.
2. **Metacognitive Word Recognition Strategies:** Jose should apply and verbalize the sound-symbol, chunking, decoding by analogy, and context word recognition strategies appropriately to decode words.
3. **Fluency:** To develop fluency, Jose should read with increased accuracy, adjusting his rate to allow for reading with expression and comprehension through modeling, ROAR reading 4 times per week, and increased independent reading.
4. **High Frequency Words:** Jose should increase his store of automatic high utility words and their meanings to facilitate fluent reading with comprehension through See-It, Say-It, Spell-It and a review box.
5. **Writing:** Jose should use spelling-by-sound while writing to become more phonemically aware. He should also construct more complex sentences in his writing through Phelps Sentence Builder and scaffolding.

6. Comprehension: Jose should increase comprehension of narrative text read by the application of metacognitive strategies, story element knowledge, and graphic organizers that facilitate his interaction with the text. Metacognitive strategies that should be explained, modeled, and scaffold for his internalization which include prediction, sequencing, and summarizing, making connections, and retelling. In nonfiction text based on his interests, making inferences and self-monitoring through use of text coding. The goal should be his independent use and verbalization of these strategies.

These specific recommendations for home and school are suggested for Jose to increase his literacy skills and strategies for word recognition and reading comprehension skills and strategies at his grade level. At home, Jose should read for 10-15 minutes aloud, have broad exposure to spoken vocabulary experiences that involve new ideas, words, word meanings, and have an adult read aloud language-rich texts one or two levels above his reading level. He needs encouragement to read independently aloud to his brother and read silently to himself which will provide quality, diverse reading experiences. At home and school, fluency comprehension questioning activities throughout the use of the ROAR strategy should be read (an adult reads a sentence, read together, then Jose reads the same sentence) to provide Jose with opportunities to practice and improve his fluency.

For school assignments or other reading below level through fourth grade level ROAR could be used with a peer or teacher should be done before Jose reads them aloud—this should be about four times per week for 15 minutes at a time to improve sequentially retelling events. Jose should independently read from 15 to 20 minutes per day in material that is comfortable for him. Also, a set of magnetic letters on the refrigerator, or at a center should be available to practice

sliding sounds together to make new words changing one sound at a time, referring to sounds rather than letter names which is necessary to improve word identification and comprehension.

As Jose writes, he will need to stretch words out listening carefully for the sounds and writing the sounds as he hears them and encourage him spell correctly and verbally express his thoughts before writing. Jose should stretch and sound words that do not fit normal phonic patterns (such as *there, here, hear, does*) as in high frequency words. When he sounds words out as he reads, he needs to carefully look at each sound before he says the word unless the word has an irregular spelling. In conclusion, Jose continues to struggle as do so many other students with reading difficulties that may or may not be an ELL. Jose will need to continue to practice the recommendations stated above to achieve further literacy improvement close to his grade level.

Conclusion

This case study has been discussed at length with researched evidence to support assessments and interventions. There are no easy remedies to the literacy problems students face in our American society. While understanding that the reasons and situations of reading difficulties are numerous, I believe that this case study which focused on the implementation of an intervention plan using word recognition and reading comprehension skills and strategies provided the opportunity for a struggling reader to improve his literacy skills. As stated previously, explicit, balanced-literacy instruction, on-going assessments, and the collection of data necessary for all students' academic achievement especially those who have reading difficulties is the basis for effective literacy instruction (Brown, Pressley, Van Meter, & Schuder, 1996). A long term intervention plan will be effective if applied in an explicit, systematic, balanced-literacy instruction with continual assessments to guide instruction as thoroughly discussed in this manuscript.

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Appendix

Table 1 Word Identification Assessments Results, Analysis and Interventions

Woodcock Reading Mastery Test-R ^{nu} (WRMT-R ^{nu})				
Assessment	Pre Scores	Post Scores	Analysis	Interventions
Word Identification	Form H GE: 2.3 PR: 15 SS: 85	Form G GE: 2.5 PR: 19 SS: 87	<p><u>Pre-Assessment-</u> -Slow to read words close to the 5 second limit -Response often over 2 seconds with few decoding attempts -Grade Equivalent (GE) almost 3 levels below grade level -Percentile Rank (PR) and Standard Score (SS) are in the below level range. --Difficulty with sounding out beginning consonant blends, middle consonants, digraphs and diphthongs, and two syllable words</p> <p><u>Post Assessment-</u> Slight improvement -Slow to respond with words not easily identifiable, identified more words, positive decoding attempts, scores continue to be in the below average range. -Some difficulty with sounding out beginning consonant blends, middle consonants</p>	<p>Tier 3 -Used word study beginning with letter-name recognition then letter-sound recognition using techniques for Dolch high frequency words. -Utilized See-It, Say-It, Trace-It, Write-It alone and difficult words in context. -Stressed full analysis – look carefully at each part of a word and focus on chunking it (combining letters that go-together) -Applied Elkonin box activities for sequential, phonics, and personal word wall</p>

Table 2 Phonemic Decoding Assessments Results, Analysis, and Interventions

Woodcock Reading Mastery Test- R^{nu} (WRMT-R^{nu})				
Assessment	Pre Scores	Post Scores	Analysis	Interventions
Word Attack	Form H GE: 1.8 PR: 15 SS: 84	Form G GE: 2.5 PR: 19 SS:87	<u>Pre Assessments -</u> -Difficulty with Reversals, <i>th</i> - digraph; two and three consonant blends, <i>-c-d,-n't, tw-</i> vowel patterns, <i>-ay, -ae-, -ai- -igh,-y</i> CVC and CVCe patterns familiar but slow; syllables, <i>-ty, tad-, -ing, -jex</i> <u>Post Assessment-</u> Improvement of approximately one grade value -Continued difficulty with sounding out beginning, middle and end single consonants and consonant blends long vowels especially /e/ and /o/ digraphs and diphthongs, short /u/ and /i/	Tier 3 -Used full analysis of words -Explicit, systematic phonics with sound board stressing missed sounds on assessments -Used Elkonon boxes, Making Words, spelling by sound, then added correct letters, vowel pattern chart with word families, vowel and consonant pattern sorts Utilized - Dolch word list beginning at the pre primer level

Table 3 Phonemic Decoding Assessments Results, Analysis, and Interventions

Phonemic-Awareness Skills Screening (PASS)				
Assessment	Pre Scores	Post Scores	Analysis	Interventions
Rhyme	67%	83%	<u>Pre-assessments-</u> -Severe Difficulties in all areas, primarily with blending, deletion, phoneme isolation and segmentation and substitution	Tier 3 -Nursery rhymes and poems were used during the read aloud portion -Word family word sorts were implemented -Sentence strips authentic student developed sentences were utilized to analyze fluency and comprehension of sentences. -Elkonin boxes and Making Words were used to assist in blending, isolation, and segmentation -Rhymes and songs including brother's and classmates' names for substitution by changing the initial sound for another sounds
Sentence Segmentation	20%	60%	-Moderate difficulties with rhyming	
Blending	43%	71%		
Syllable Segmentation	60%	80%	<u>Post Assessment-</u> Improved skills in each area suggesting retention of phonological awareness skills	
Deletion	50%	83%		
Phoneme Isolation	56%	87%		

Table 4 Phonemic Decoding Assessments Results, Analysis, and Interventions

Qualitative Reading Inventory – 4 (QRI- 4)				
Word List	Pre Scores	Post Scores	Analysis	Interventions
Primer	Automatic: 70% Total: 80% Level: Instructional	Automatic: 85% Total: 95% Level: Independent	-Automaticity score is always lower than total scores. - <u>Pre Assessment</u> - Difficulty with short and silent e, b-d reversals, long sounding vowels, beginning, middle and ending consonant blends, digraphs and diphthongs - <u>Post-Assessment</u> - Some difficulty with: short and silent e, minimal b-d reversals, middle and ending consonant blends, digraphs and diphthongs	Tier 3 -Same interventions as stated for the previous word recognition skills and strategies.
Level 1	Automatic: 45% Total: 60% Level: Frustration	Automatic: 85% Total: 90% Level: Instructional	<u>Pre-Assessment</u> - b-d reversal, beginning consonant blends, -ear, beginning middle and end /th/, /aw/ <u>Post Assessment</u> - Improvement – Level 1 - Instructional -Indicated slight difficulty with /gh/ and middle /th/	Tier 3 -Same interventions as stated for the previous word recognition skills and strategies
Level 2		Automatic: 45% Total: 50% Level: Frustration	<u>Post Assessment</u> - -Difficulty with initial consonant blends, /y/ ending sound, silent e rule, digraph and diphthongs -Indicated a need for a continued tier 3 word study intervention	

Table 5 **Vocabulary Assessments Results, Analysis, and Interventions**

WRMT-R[™]				
Assessment	Pre Scores	Post Scores	Analysis	Interventions
Word	GE: 2.0	GE: 3.2	<u>Pre assessment -</u> Weak oral receptive vocabulary	Tier 3
Comprehension	PR: 7 SS: 77	PR: 24 SS: 89	-Errors were result due to decoding weakness, and limited experiences for background knowledge <u>Post assessment</u> – one grade improvement	-Use semantic/vocabulary development to facilitate decoding and comprehension. -Continue broad exposure to oral vocabulary experiences -Read aloud language-rich books four levels or more above his reading level. -Frayser method -Cloze model

Table 6 Fluency Assessments Results, Analysis, and Interventions

Qualitative Reading Inventory – 4 (QRI-4)				
Assessment	Pre Scores	Post Scores	Analysis	Interventions
Oral Reading Rates	CWPM	CWPM		
	(corrected words per minute)	(corrected words per minute)		
Primer Narrative	<i>Fox and Mouse</i> 40 CWPM Instructional	<i>The Pig Who Learned to Read</i> 60 CWPM Independent	<u>Pre-Assessments-</u> Primer Narrative Accuracy: 8 miscues Primer Expository Accuracy: 5 miscues -Labored, reads sound by sound, word by word, flat expression, little phrasing <u>Post Assessments-</u> Improvement – <u>Primer Narrative Accuracy:</u> 3 miscues <u>Primer Expository Accuracy:</u> 1 miscue <u>Level One Narrative Accuracy:</u> 10 miscues <u>Level One Expository Accuracy:</u> 5 Miscues - Fluency at the Primer Level improved. -Level 1 - Instructional	Tier 3 -Utilized both fiction and nonfiction text -Explicit instruction, modeling fluency using assisted oral reading: Echo and shared reading, -See word identification, phonics intervention for word parts automaticity, -Utilized new words in text to expand vocabulary Recommendations - Homework- Independent reading 20 min. per day. Build semantic (vocabulary, schema, language structure) from lesson knowledge and practice, as well as review vocabulary word cards
Primer Expository	<i>Living and Non Living</i> 48 CWPM Instructional	<i>Who Lives Near Lakes?</i> 62 CWPM Independent		
Level One Narrative		<i>The Bear and the Rabbit</i> 48 CWPM Instructional		
Level One Expository		<i>Air</i> 55 CWPM Instructional		

Table 7 **Comprehension Assessment Results, Analysis, and Interventions**

Assessment	Pre Scores	Post Scores	Analysis	Interventions
Passage Comprehension	GE 2.3 PR: 16 SS: 85	GE: 2.5 PR: 18 SS: 86	<u>Pre-Assessment-</u> Read slowly with long pauses. -Had difficulty decoding words, use chunking, decoding by analogy, nor use of context clues. <u>Post Assessment-</u> Used context clues to determine word and passage meanings.	Tier 3 Explicit instruction and modeling -Graphic organizer to writing on lined paper -Described characters, story elements, sequencing events, and plot

Table 8 Comprehension Assessment Results, Analysis, and Interventions

QRI-4				
Assessment	Pre Scores	Post Scores	Analysis	Interventions
Retellings and Questions			<u>Pre-Assessments-</u>	Tier 3
Primer Narrative	<i>Fox and Mouse</i> Familiar Retelling: 35% Questions: 83% 5/6 Instructional	<i>The Pig Who Learned to Read</i> Familiar Retelling: 46% Questions: 00% 6/6 Independent	-No difference between responses to implicit/explicit questions. -Decoding difficulty seemed to impact comprehension -Does not recall in sequence or all story elements (problem, setting)	-Implemented explicit instruction while modeling-predicting, story elements, sequencing, and
Expository	<i>Living and Non Living</i> Familiar Retelling: 25% Questions: 67% 4/6 Instructional	<i>Who Lives Near Lakes?</i> Familiar Retelling: 50% Questions: 100% 6/6 Independent	-Read slowly with long pauses. Had difficulty: decoding words, chunking, decoding by analogy, and use of context to determine words.	summarizing, then utilized interactive reading -Used graphic organizers for visual picture of story elements.
Level One Narrative		<i>The Bear and the Rabbit</i> Familiar Retelling: 41% Questions: 67% 4/6 Instructional	<u>Post-Assessments</u>	
Expository		<i>Air</i> Familiar Retelling: 25% Questions: 67% 4/6 Instructional	Improvement <u>Level one –</u> Instructional. -Continued difficulty with retelling, and sequencing at the primer level	