Increasing oral reading fluency through a targeted intervention

Marie Sanguinetti

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Increasing Oral Reading Fluency Through
A Targeted Intervention
Marie Sanguinetti
A Graduate Field Experience
Submitted in Partial Fulfillment for the Degree of
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(Date)
Abstract

The case study examines an intervention aimed at increasing oral reading fluency in a struggling second grade reader. The intervention was designed around the student’s literacy needs, current literacy research, and Common Core State Standards. The intervention utilized repeated readings, phonemic awareness instruction, phonics instruction, self assessment, corrective feedback, and modeling to increase oral reading fluency. The intervention took place for five weeks with a total ten intervention sessions. Results of the study suggest that the intervention was effective as overall oral reading fluency increased. Results also suggest that corrective feedback, instruction in phonemic awareness and phonics, and self assessment are effective instructional methods to increase oral reading fluency in addition to repeated readings.
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The purpose of this study was to increase the oral reading fluency of a struggling reader. At the beginning of this study the student, Annie\(^1\), was 8 years 5 months old and had just completed second grade. Annie is African American. Despite completion and promotion from second grade, Annie had identified needs in the area of literacy. In this chapter, a brief introduction of the student is included. A connection to State Standards is detailed which further elaborates on Annie’s literacy needs. Furthermore, a discussion of special education law is incorporated to provide clarity to the difference between struggling readers and students with identified disabilities. Finally, this chapter concludes with a glossary of helpful educational terms.

Introduction to the Student

Annie is a happy child who enjoys swimming, coloring, and playing on the computer. She is agreeable toward adults and tries hard to incorporate what she is learning into every day conversation. Annie loves dogs and playing outside. She enjoys watching shows on the Disney channel. Throughout the intervention, Annie talked about her two younger siblings and her parents.

Annie has attended public school since pre-kindergarten in an urban setting on Milwaukee’s north side. The school she attends has 96.7% students who are from economically disadvantaged backgrounds and 16.4% of students receive special education services. Annie reports that she enjoys school, and especially liked her first grade teacher. She also expresses

\(^1\) Student name has been changed to protect anonymity
interest and pleasure in reading but does not read on her own accord. Annie was identified as a struggling reader. Her father expressed concern about her reading progress describing it as “not very good.”

Annie began attending a community learning center in February of 2012. The director of the learning center administered the Woodcock Reading Mastery Test, Third Edition (WRMT-III) (2011) and a phonemic awareness test, PASS. Results from the WRMT revealed that her basic reading skills fell into the “extremely difficult” range. More specifically, oral reading fluency and word identification fell into the “extremely difficult” range as indicated by the WRMT proficiency categories. Results of the phonemic awareness test exposed delays in rhyming, phoneme isolation, phoneme segmentation, and syllable segmentation. Once Annie was tested, she was assigned a tutor. Her tutor held a graduate degree in education and designed once a week tutoring sessions for 90 minutes to target Annie’s literacy needs. Her tutor specifically worked on sight word identification, comprehension, and oral reading fluency.

Annie was selected to participate in this study because of her identified needs in literacy. The intervention designed for Annie by the intervention instructor focused on her reading delays and intended to increase her reading skills to the level of her peers. According to the Common Core State Standards for Literacy 2.RFS.3 (Common Core State Standards Initiative, 2012), students in second grade should be able to “know and apply grade-level phonics and word analysis in decoding words.” More specifically, the Common Core State Standards for Literacy state that students in second grade should be able to decipher between words with long and short vowels, recognize common diphthongs, decode phonetically correct two syllable words with long vowels, and read common words that have irregular spellings. Moreover, Common Core State Standard 2.RFS.4 (Common Core State Standards Initiative, 2012) asserted that students in
second grade should be able to “read with sufficient accuracy and fluency to support comprehension.” This includes the ability to read grade level text out loud accurately, with appropriate speed, and with prosody. Furthermore, reading with fluency includes purposeful reading to understand the text and make self corrections when a mistake has been made.

Due to Annie’s identified needs in the areas listed above, an intervention to support her needs was implemented (see Chapter 2 for research supporting the intervention). Often, students with identified needs are referred to special education. It is unclear if Annie was ever referred for special education, but at the time of the present study, she was not receiving special education services. Special education law under the Individuals with Disabilities Education Act (IDEA) mandates that students are instructed in the least restrictive environment (LRE). In order to qualify for special education services, a comprehensive examination of the student’s past and present academic performance is conducted, as well as teacher and parent interviews. Much research has gone into assuring that students who receive special education have not been unfairly placed in special education settings. Hill et al. (1993) stated that there has been concern about the disproportionate number of students in special education from minority groups and different linguistic backgrounds. Diana v. State Board of Education (1970) attempted to rectify this problem. This ruling stated that students should not receive special education services because of ethnic differences or differences in language.

Therefore, even though Annie had needs in reading, she could not meet the criteria for special education services. Despite lagging behind her peers in reading skills, she does not need special education services in reading. Instead, her needs can be addressed in the regular education classroom through the general education curriculum and interventions designed to target her identified needs in literacy. The instruction that she received at the community
learning center from both her tutor and during the case study intervention are types of interventions that meet her needs.

Conclusion

Annie is an affable second grade student who is struggling in basic reading skills. According to norm referenced tests, Annie especially struggles with oral reading fluency and word identification. In light of the protections granted for minority students under Diana v. State Board of Education, she does not qualify for special education. Annie is joined by a large number of students in America who struggle to acquire basic reading skills. The next chapter discusses the research on how to support a student with Annie’s reading needs. This research is the basis for the intervention Annie received to target her delayed reading skills.
Glossary of Terms

Decode: the ability to apply knowledge of letter-sound relationships. This includes knowledge word families, digraphs, and vowel pairs to correctly read words (Foorman, Francis, Fletcher, Schatschneider, & Mehta, 1998).

Fluency: Includes three main components: (1) accurate and automatic word recognition (2) ability to read at an appropriate rate (3) reading with prosody (Applegate, Applegate, & Molda).

IDEA: The Individuals with Disabilities Act is a United States federal law overseeing how public entities make available intervention and special education for children aged birth to 21 (IDEA, 2004).

Phonics: Skills needed to break the written code as it requires students know and match letters with sounds and use this information to decode words.

Prosody: Refers to how expressive a child is when reading including components such as inflection, rhythm and emphasis given to words and sentences when reading out loud. It also takes into account the child’s ability to pause at commas or periods and intonate voice with explanation points or questions (Therrien, Kirk, & Woods-Groves, 2011)

Phonemic Awareness: The ability to break words down by each sound. Phonemic awareness tasks can be completed without breaking the written code of reading such as rhyming or switching sounds in a given word to make a new word (Wood, 2000).
Chapter Two: Research Related to Literacy

Introduction

The purpose of this study is to explore the effect of an intensive intervention on the oral reading fluency of a struggling reader, Annie. Reading is a crucial skill students acquire during their early years of schooling. However, many students have difficulty learning how to read. Moreover, a struggling reader in elementary school usually continues to struggle throughout schooling (Foster & Miller, 2008). The current study aimed to increase one struggling reader’s fluency skills by use of repeated readings, phonemic awareness, phonics activities, corrective feedback, and self evaluations. The first section of this chapter focuses on a range of skills needed and factors influencing becoming a proficient reader in elementary school. The second section of this chapter focuses on studies teaching fluency to students in elementary school. Finally, the third section focuses on studies that involve phonemic awareness and phonics instruction to boost skills in struggling readers. This chapter will carefully examine research in the area of literacy that provides insight into complexities of learning how to read.

Reading Skills

Learning how to read requires the blending of many skills. Elementary children use their environment, vocabulary, knowledge of letter sound relationships, social interactions, background knowledge, and early literacy skills to begin to make sense of printed language. The studies in this section give an overview of many of the essential skills needed to learn how to read, and specific reading strategies employed to target these skills. Furthermore, the issue of nature vs. nurture is explored in the context of learning how to read.

A study by Petrill et al. (2010) examined the role of student’s environment and genetics when learning how to read. Specifically, they looked at the genetic and environmental factors
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influencing early reading achievement. Their study focused on the behavioral genetic components of reading development. More specifically, the researchers stated “we examined 6 reading related skills: word identification, letter identification, pseudoword decoding, expressive vocabulary, phoneme awareness, and rapid naming” (p. 661). They wanted to know the genetic and environmental factors that contributed to variance in (1) original reading levels (2) rate of increased reading growth (3) the relationship between the beginning reading level and rates of increased reading growth, including the correlation of the rate of increased growth as independent or related to initial reading levels. The independent variable was behavioral genetic components. The dependent variables were the reading skills listed above.

Participants were 317 sets of identical (N=135) and same sex fraternal (N=179) twins in kindergarten and first grade from the Western Reserve Reading Project (WRRP) in Ohio. Participants were assessed at their place of residence when they initially entered the study. Currently, annual follow up assessments are taking place. These assessments occur within one month of the anniversary of the prior assessment. The WRRP is a longitudinal study. Therefore, results from the current study were based on the first three assessments for which the data was available. The mean age of participants at the time of the first assessments was 6 years old with a standard deviation of .68 years. The majority of parents were white (92% of mothers, 94% of fathers) and most (92%) were married or living together. Twelve percent of parents completed high school or less, 18% completed some college, 31% earned a bachelors degree, 23% completed some postgraduate studies or earned a degree, and the remaining 5% did not state their educational achievement. Educational attainment is similar to that of the general United States population with the exception of a slight overrepresentation of parents who completed a bachelor’s degree.
During each home visit, participants were assessed for 90 minutes on a battery of reading-based measures. Twins were tested in separate rooms and by different examiners. In order to verify relationship, DNA was collected for the majority of participants (a select few parents did not give consent so relationship was determined using a parent questionnaire). Participants were assessed on the Woodcock Johnson Reading Mastery Test (WMRT; Woodcock, 1987) in the areas of word identification, letter identification, and Word Attack skills. Expressive vocabulary was assessed using the Vocabulary subtest from the Stanford–Binet Intelligence Test (Thorndike, Hagen, & Sattler, 1986) as well as the Boston Naming Test (Goodglass & Kaplan, 2001) and phonemic awareness was evaluated using the Phonological Awareness Test (PAT; Robertson & Salter, 1997). Lastly, Rapid Automatized Naming (RAN) of letters and numbers was assessed using the Comprehensive Test of Phonological Processing (Wagner, Torgesen, & Rashotte, 1999). A composite score was given for both the PAT and RAN assessments to make one phonemic awareness score and one rapid naming score.

The researchers note that age-normed measures are not useful when evaluating growth because the means and standard deviations are set values regardless of age. In light of this, the researchers used W-scores to assess growth on the WMRT and raw scores to assess growth on the other standardized measures. W-scores are based on Item Response Theory Model is a meant to score and analyze, assessments that measure abilities and attitudes, so it can be assumed that there are equal intervals. Raw scores cannot be assumed to have equal intervals. There was growth on all standardized measures, however, the growth on vocabulary was relatively weak. In order to analyze results, the researchers employed several measures based on a latent growth curve approach which included univariate genetic estimates and bivariate genetic estimates.
In answer to the researcher’s first question, what factors contributed to variance in initial reading levels, they found that both environmental and genetic factors were vital to initial reading performance in all test measures. In addition, they found that RAN scores were mainly focused by genetics because it is fluency based. Furthermore, individual student differences on “content-based measures” (e.g. word knowledge, spelling) are more likely influenced by environmental factors versus genetics.

In answer to their second research question, what factors are related to rate of increased reading growth, they found that genetic influences on rate of increased reading were statistically significant on two measures: phonemic awareness and RAN. However, these genetic influences were closely correlated to the initial reading performance score. In fact, they found that there were not other genetic effects that influenced growth rate aside from those shared with the initial test score. Additionally, an analogous pattern was observed in the non-shared environmental influence of the RAN assessment which entirely overlapped with beginning reading performance. This implies that certain environmental factors on rate of change were entirely correlated with the same factors that we present at original testing.

In answer to their third question, what shared environmental influences are related to the rate of growth, they found that “shared environmental influences were statistically significant for word identification, letter identification, pseudoword decoding, and phoneme awareness” (p. 665). Interestingly, in contrast to the genetic influences, one third to two thirds of the shared environmental difference on the rate of increased reading growth were independent from the initial performance. This suggests that both overlapping and shared environmental influences correlate to reading growth and ability. Furthermore, this indicates that shared environmental
influences, in the case of this study school, can speed up or hinder the rate of reading growth beyond the student’s ability level at initial testing.

The results of this study indicate that genetic differences are important to consider as children enter the classroom. Furthermore, the results suggest environment may play an essential role in the rate of reading growth independent of genetic influences. The implications of this study are such that teachers and instructors of children need to be aware of the environment they are creating in their classroom. This study supports that environment may be a mitigating factor in reading development. As such, teachers have an incredible responsibility and obligation to create an environment that is rich in literacy. However, results from this study suggest that genetic influences should not be overlooked when designing reading instruction and intervention. Genetics play a powerful role in the development of the child and should not be ignored in the classroom. They argued that their study supports the need for more attention to genetic risk and protective factors, the family and home environment, and the community as a whole as educators design reading instruction for students.

Petrill et al. (2010) emphasized the importance of genetics and environmental factors as students learn to read. Another important factor that can aid or hinder reading development is language. There is a large body of research supporting that language and reading are inextricably linked. A study by Lukin and Estraviz (2010) explored the relationship between students with severe receptive language impairment (SRLI) and progress in learning how to read with an intervention. Six students with SRLI participated in this study. The students received reading intervention with the Reading Recovery program. The independent variable in this study was the reading recovery program. The dependent variables were the book level the child achieved and the amount of time he or she spent in the program.
Reading Recovery is an established program intended to improve reading scores for struggling readers. The program aims to increase the student’s ability to comprehend what a text is about by learning “to attend to the detail of sound/letter links while maintaining a focus on the meaning of texts” (p. 128). During Reading Recovery, students are taught to read independently by utilizing metacognitive skills like self assessments, checks for understanding, predicting, and providing proof of meaning. The heart of the program was on developing comprehension in reading passages and on writing assignments. While participating in the Reading Recovery program, students would read several books and write stories while learning to identify letter/sound relationships.

The students in their study participated in individual Reading Recovery program four times a week. They received instruction from professionals trained in Reading Recovery. Students in the study participated for varying amounts of time (18-27 weeks). Students were assigned a reading level using a numerical scale beginning with 1. However, some children did not meet the level 1 criterion (pre-readers) so they began the program with dictated Texts (DT). Of the six students participating, four of them entered the program at a DT level, and two entered the program at a level 1. The students exiting levels ranged from levels 5-18. However, most children (children without a SLRI diagnosis) who exit the Reading Recovery program typically have an exiting level of 16.

The authors of this study did not find that the students in the study made significant gains. They found that struggling readers with SRLI had notably poorer results in terms of reading improvement than did struggling students who participated in the program who did not have a SRLI diagnosis. Many of the students regressed in Reading Recovery book level after
being exited from the program. In short, the intervention did not produce long term reading improvement for students with SRLI.

The results of this study give important insight to educators who are teaching struggling readers how to read. Students with SLRI are not just learning how to break the code of reading like most children who are learning how to read. They have the additional task of making sense of the language of instruction. When learning how to read, students employ a variety of skills such as phonological awareness, semantics, and syntax. These essential skills may be lacking with students who have SRLI, therefore making it more difficult than their non-SRLI peers to learn how to read. These skills aid students in breaking the written code of reading. In addition, these meta-linguistic skills also help students with understanding the relationship between the sounds in the words and the meaning of the word. Students with SLRI have difficulty using and understanding new vocabulary. Therefore, children with SLRI should be provided with many opportunities to talk about what they just read and interact with the vocabulary and meaning of written texts.

Many struggling readers may have the same difficulties in code breaking written language as the children with SLRI demonstrated. Based on the outcomes from the current study, any individual working with students who are acquiring early reading skills must be acutely aware of the relationship between spoken language and reading. The authors note some important early literacy skills that are imperative in supporting students as they learn how to read. They recommend implementing phonological processing activities to help students understand the letter/sound relationship, explicit instruction of the relationship between written and spoken language, and providing students with opportunities to support oral language in a variety of contexts (e.g., following multi-step directions, explaining a problem, sequencing an
event). These teaching practices will help students understand what they have read, as well as what is being asked of them daily.

The results of the current study vividly illustrate how oral language and written language are intertwined. A study Foster and Miller (2007) aimed to explain the trajectory of early literacy skills and its impact on overall reading achievement. Foster and Miller stated that there is a large body of research demonstrating that the literacy achievement gap already exists when students enter kindergarten with low literacy skills. Juel (1988, as cited in Foster & Miller, 2007) found that there is an 88% chance that a struggling reader in first grade will still be a struggling reader in fourth grade. In light of these facts, Foster and Miller conducted a study designed to give clarity to the development of phonics and comprehension skills for young students (kindergarten through third grade). They also set out to explain:

The developmental trajectory for phonics and comprehension skill development for children in three groups of students: (a) students who enter kindergarten with high literacy readiness, (b) students who enter kindergarten with few literacy skills, and (c) the larger group of students who enter the school environment with more average of typical skill levels (Foster & Miller, 2007, p.174).

In addition, they were interested in the role of socio-economic status for students with low literacy skills at the start of kindergarten through third grade. They conjectured that students who began kindergarten with low literacy skills would make gains throughout first and second grade, but there would still be a lag in phonics skills compared to peers. Furthermore, they hypothesized that in third grade when struggling readers typically reach the same phonetic skills as non-struggling readers, that a second reading gap would be unveiled in the area of comprehension.

The independent variables in this study were phonics and comprehension skill development
based on age, and socio-economic status. The dependent variables are the developmental trajectory in literacy and the development of literacy gaps for early elementary students based on measures of the Early Childhood Longitudinal Study (ECLS, n.d).

Data for Foster and Miller’s study was acquired from the kindergarten cohort of the Early Childhood Longitudinal Study. A randomly selected group from a nationally represented sample was selected. There were a total of 12,621 students who were selected, and were tested in every test session from kindergarten through third grade. Students with identified disabilities were included in the study. Sixty-one percent of participants were white, 14% were African American, 13% were Hispanic, and 12% were from other minority groups. Data was collected in the fall and spring of kindergarten, and in the spring of first and third grade.

Students were tested using the methods of the Early Childhood Longitudinal Study which looked at the following areas: letter recognition (both upper and lowercase), beginning sounds, ending sounds, sight words, words in context (specific words within a sentence), and literal inference (determine the meaning of a sentence or paragraph). The scores for letter recognition, beginning sounds, and ending sounds, were added together to create a phonics score for each test period. The scores for sight words, words in context, and literal inference were added together to create a score for comprehension. Each of the six subtests had a high score of 1 (all questions answered correctly) and a low score of 0 (no questions answered correctly). Therefore, the highest score a student could earn for the phonics composite or comprehension composite was 3 and the lowest was 0. Students were grouped depending on their composite scores. Students who fell one standard deviation below the mean were put in the low literacy group, students who fell one standard deviation above the mean were put in the high literacy group, and the rest of the students were placed in the average reading group.
Each group had a gender distribution that was statistically identical to the entire sample. The average readiness group had a racial distribution identical to the entire sample in the average readiness group, but not for the high performing or low performing groups. Whereas 64% of the entire sample was white, 74% of the high performing group was white and 46% of the low performing group was white. African Americans comprised 14% of the entire sample, 7% in the high group and 20% of the low group. Thirty percent of the sample was Hispanic, 7% in the high group, and 21% in the low group. Other races were 12% of the sample, and comprised 13% in both the high and low group.

An Analysis of Variance (ANOVA) was performed for both the phonics and text comprehension scores. A Tukey post hoc analysis was carried out to discover statistically significant differences between the different groups at the four different testing periods. If a statistically significant difference was found, an effect size calculation was made. Effect size calculations are important for studies that summarize findings from a specific area of research, because it reports the estimated magnitude of a relationship between variables. In order to determine the role of “school readiness, poverty, status, and parent education level in the fall of the kindergarten year to the third grade reading level” (p. 176) a regression analysis was performed.

Foster and Miller found (2008) that there was a significant difference between phonics ability between students in the high and average groups and in the low group throughout the kindergarten year. At the end of first grade, there still remained a significant difference but the gap was closing. The phonics gap was closed between the average, high, and low groups by the end of third grade, because the difference between the high and low groups was no longer statistically significant. In the area of comprehension, they found that at the beginning of
kindergarten there was no significant difference between the low and average groups. This was not surprising as phonics abilities precede comprehension abilities. There was a significant difference between the high group and the low and average groups with an effect size of .45 for both groups. However, by the end of kindergarten high group had made gains in comprehension but the low group had made no such gains with an effect size of .97 compared to the low group and .87 for the average group. At the end of first grade, the high group was still significantly outperforming the low and average groups with effect sizes of 2.73 and 1.52 respectively. At the end of third grade, the difference in comprehension was closing between the high and average groups but still existed for the low group. The effect size grew from 1.03 in first grade to 1.22 in third grade between the low and average groups but decreased from 1.52 to 1.42 between the high and average groups. Socio economic status was found to be an important contributor to low literacy achievement. Parent education level was not found to be statistically significant when poverty status was included.

The results of this study indicated that students who enter kindergarten with strong phonics abilities are able to quickly transition to learning comprehension skills. Conversely, students who enter school with low literacy skills spend the first four years catching up to the decoding skills of their stronger counterparts. By the time their phonics abilities are the same, the difference in comprehension abilities are exacerbated. This demonstrates that there is an overlap in the development of learning early literacy skills. It also supports the idea that poverty status plays an important role in the development of literacy achievement. Students from more affluent families are more likely to enter school with higher school readiness abilities compared to their low income counterparts.
In light of this information, it is important to have early interventions for struggling readers, especially those who live in poverty. Early reading interventions need to target not only phonic skills, but also emerging comprehension abilities. If this early intervention does not happen, it is highly likely that students will always lag behind in the area of literacy by just substituting one literacy lag for another (in the case of this study, poor phonics skills for poor comprehension skills). The authors research support that students who enter school with some school reading readiness, and have a handle on phonics and decoding by first grade, are typically on their way to text comprehension by third grade. It is important for teachers and school personnel to begin target intervention for students demonstrating low school readiness immediately. Phonics interventions must start early, and it is essential that interventions support comprehension in effort to eliminate the “comprehension literacy gap.”

The study by Foster and Miller (2008) highlighted the importance of early literacy skills building on top of each other. Often, when providing intervention services to struggling readers, teachers focus solely on the phonemic and phonological processes. A pitfall of this could be that a second literacy gap is revealed in the form of comprehension. A study conducted by Applegate and Applegate (2010) evaluated the role of reading comprehension in elementary student’s motivation to read. Their study provides interesting insight in how a comprehension gap influences overall reading success.

Applegate and Applegate (2010) explored the relationship between elementary student’s motivation to read and their answers to comprehension questions that required higher level thinking (complex comprehension, determining the relationships within ideas, applying text read to new situations). They were interested on how motivation to read differed or did not differ between genders when reading narrative texts. The researchers wondered whether students who
had the ability to think critically, make connections, and apply themes from texts at high levels, would be more inclined, more motivated, and have higher levels of self efficacy (belief in their own reading ability) in reading during elementary school years. The authors made a careful distinction between the “inclination to think critically about text, and not the ability to do so” (p. 228). They argued that all children are able to critically think about different aspects of their reality, but may not be able to access those same skills when reading. Applegate and Applegate set out to answer three questions, 1) Is the tendency to respond thoughtfully to narrative text associated with overall reading motivation in elementary children? 2) Would motivation and the tendency to respond thoughtfully to texts be related to gender? 3) Is there a negative relationship between grade level and value placed on reading? The independent variable was motivation to read as measured by the Motivation to Read Profile (MRP; Gambrell, Palmer, Codling, & Mazzoni, 1996). The dependent variables were gender and the tendency to answer comprehension questions thoughtfully as measured by the Critical Reading Inventory (CRI; Applegate, Quinn, & Applegate, 2008).

The sample included 443 students (202 males and 241 females) in grades 2 through 6. In order to qualify for the study, participants had to score at least 81% on the CRI, a test measuring reading comprehension (60% of test items evaluates higher level comprehension, 40% of questions evaluate basic comprehension). All participants were from Pennsylvania, New Jersey, and Delaware and attended public schools (63%), parochial schools (26%), private schools (10%) or home schools (1%). Of the participants, 86% were white and 14% were from a minority group. Participants in the study were tested between 2006 and 2009 on two narrative passages at their grade level. Participants were broken into two groups, Red and Blue, based on their CRI scores. The Red group included students strong in basic comprehension (recall), or text
based, but weak in higher level comprehension. The Blue group included students who were strong in both areas. Both groups were given the MRP to evaluate attitudes and motivation in relationship to reading. The researches then compared the results of the MRP between the two groups.

Based on the results of the MRP, Applegate and Applegate found in answer to their first research question, is the tendency to respond thoughtfully to narrative text associated with overall reading motivation in elementary children, that the inclination to respond thoughtfully to text, had a statistically significant impact on the motivation of a student to read, the value the student attributed to reading, and self-efficacy as a reader. In answer to their second research question, does the student’s gender have an impact on motivation to read, females were significantly more motivated to read in terms of total motivation and value attributed to reading. However, there was no gender difference in regards to self efficacy as a reader. In answer of their last question, is there a negative relationship between grade level and value placed on reading, a statistically significant difference existed as age increased in only the Red group. This difference was especially dramatic for females in the red group. In short, their third research question was affirmed for students who struggled with higher order comprehension questions.

In sum, Applegate and Applegate (2010) found that students who were inclined to answer higher level comprehension questions in response to narrative texts, were more motivated to read, felt like they were better readers, and placed a higher value on reading. Furthermore, they confirmed that gender does play a role in motivation to read. This information is valuable to teachers because they can design instruction around boosting higher level comprehension skills. It is fair to infer that students enjoy reading more, are more motivated to learn how to read, and are willing to persevere through challenging texts, when they feel confident in their abilities and
find value in reading. Therefore, if struggling readers were taught how to make meaningful connections to the narrative texts that they read, then they may be more motivated to learn the decoding strategies necessary to comprehend independently. Results from this study confirm that inclination to relate and connect to texts boost students enjoyment of reading.

In conclusion, this first section gave an overview of many important factors influencing the early literacy skills necessary for reading success. Petrill et al. (2010) detailed the significance of environmental influences impacting early reading success. Their study also found that genetics play an important role in how students learn to read. Lukin and Estraviz (2010) explored the factors of written and spoken language in reading achievements. Their study found that difficulty in one area may lead to difficulty in the other area. Thus, their study revealed a difficulty for some students to break written code to become proficient readers. Foster and Miller (2007) sought answers to why some students appear to struggle with reading from an early age. Results of their meta-analysis exposed that students who enter school in kindergarten lacking phonological awareness spend their first three years of schooling trying to catch up to their peers and acquire those skills. By the time phonological processing skills are comparable to their non-struggling peers, a second literacy gap in the area of comprehension is uncovered. Finally, Applegate and Applegate (2010) explain how immature comprehension skills impact student’s overall motivation to read. Their study found that students who did not respond to comprehension questions in a thoughtful manner, placed less value on reading and did not see themselves as good readers. They also found that students who did not exhibit high level comprehension abilities to narrative texts were less motivated than their peers who did respond thoughtfully to comprehension questions. Overall, these studies stress the importance for acquisition of early literacy skills for long term reading success.
Reading Fluency

In this section, four research studies are presented. These studies highlight the importance of reading fluency in elementary school students. The section also outlines specific reading strategies that are imperative to teaching oral reading fluency. Many students struggle with fluency in the early elementary years. Reading fluency has been related to reading comprehension abilities. As Applegate and Applegate (2010) noted, comprehension is an important aspect in reading that keeps students interested and engaged in reading. Therefore, it is essential that students become proficient in reading fluency so that they may continue to build upon fundamental skills and develop higher level reading skills.

Therrien, Kirk, and Woods-Groves (2011) evaluated the effectiveness of a fluency intervention. They sought to see if repeated reading of the same text is an essential component to boosting reading fluency in elementary students. There has been considerable support that reading and re-reading a passage until a student is able to do so with fluency (e.g., speed, prosody, expression, and accuracy) and obtain adequate comprehension scores, increases reading fluency in students. Another body of research contends that mere exposure to texts on the student’s instructional level will boost oral reading fluency. They argue that re-reading the passage has nothing to do with increased fluency; rather it is the feedback about reading that increases fluency (Kuhn & Stahl, 2003; Pressley, 2006 as cited in Therrien et al., 2011). The dependent variable in this study was reading fluency. The independent variables were Re-read-Adapt and Answer-Comprehend (RAAC) (Therrien et al., 2006a) which emphasizes repeated reading in one condition and RAAC with non-repetitive reading.

The purpose of their study was to look at passage repetition within a fluency program (RAAC) on students who receive special education, Tier 2, or Tier 3 support. The following
questions were posed: (1) What is the effect on RAAC for overall reading fluency? (2) What is the effect on RAAC for overall student reading achievement? (3) How do student’s scores compare for both versions of the RAAC?

Thirty students in grades three, four, and five participated in this study. The participants lived in rural Iowa. All of the students except one were Caucasian, the other student was African American. Eleven of the students were male, 19 were female. All students were receiving Tier 2, Tier 3, or special education services in the area of reading. A ratio of 2:1 was randomly assigned to the non-repetitive reading RAAC intervention. The reasoning for this ratio was that there was considerable support for the repeated reading intervention. The researchers sought to determine if a non-repeated fluency intervention following the same format would be as beneficial as the repeated reading condition.

Informal reading inventory pre and post tests were given to all participants, as well as a norm referenced test. Students received a RAAC intervention for a total of fifty 15 minute sessions over the course of four months. Sessions took place approximately three times a week. RAAC interventions for both groups (repeated reading and non-repeated reading) were administered by trained personnel. Students began reading texts at their instructional level as determined by the two pre-test measures.

In the RAAC program with repeated reading, students were first presented with a picture cue card of the text to provide background knowledge. Then, students read and re-read the same passage until each student reached the pre-established number of correct words. The criterion was based on Hasbrouck & Tindal (1992) of students reading in the 50th percentile at their instructional level. After the readings, the teacher provided corrective feedback. Their reading was evaluated using the “How Did I Read Rubric” designed by U.S. Department of Education
National Center for Education Statistics (1995). Then, comprehension questions were administered using cue cards followed by four inferential comprehension questions. In the RAAC program without repeated reading, the same steps were followed except that students read two different passages during their intervention sessions instead of only one. They did not read until a criterion was met, but rather read each passage only one time. By the end of the intervention, students in the non-repetitive reading RAAC intervention had read twice as many passages as students in the repetitive program.

Therrien et al. (2011) found that there were statistically significant gains from pre to post tests on both measures. In short, both RAAC interventions were effective at increasing student reading fluency. Students in the repetitive reading condition increased 15.73 words per minute and students in the non-repetitive reading condition increased 26.89 words per minute. T-test results did not indicate a statistically significant difference between the two conditions.

The results of this study indicate that both versions of RAAC are an effective intervention. Furthermore, results indicate that feedback on students' reading errors is an effective way to increase reading fluency for students in third through fifth grade. It also suggests that allowing students to evaluate their own reading may be an effective method of increasing reading fluency. There was not a statistically significant difference between repeated reading condition and the non-repetitive reading condition, however, there was a difference between the repetitive reading and non-repetitive reading groups. The non-repetitive reading group outperformed the repetitive reading group, suggesting that exposure to a variety of texts is a more effective method when corrective feedback is provided.

Corrective feedback appears to be the most essential component in improving reading fluency. Teachers should take this into consideration when developing lessons or interventions
that stress independent silent reading. Results of this study suggest that corrective feedback is a critical component for struggling readers in elementary school to develop oral reading fluency. Another important contributing factor could be the length of the intervention (50 sessions, three sessions a week). This was a relatively long intervention which allowed students to practice the skill frequently and for a prolonged period of time. Teachers looking to implement a response to intervention need to be aware that better results will be achieved when the students are participating in the intervention for an extended length of time.

The study by Therrien et al. (2011) provides important evidence about the use of repeated reading and feedback in increasing young reader’s oral reading fluency. A study conducted by Ring, Barefoot, Avrit, Brown, and Black (2012) not only shows that repeated reading is an effective strategy to increase fluency, but also examines the effect of word level training in improving oral reading fluency.

The purpose of the study conducted by Ring et al. (2012) was to “evaluate the comparative effectiveness of an approach to word level training that was distinctive for its use of repeated reading designed to promote the recognition of orthographic units (i.e., letter clusters) within words” (p. 2). Their study postulated that repeated readings of a text and word level training programs would both be beneficial to struggling readers. Furthermore, they stated that they expected to see stronger gains in the word level group compared to the text level group. Lastly, they sought to identify any individual qualities that correlated with the intervention received. The dependent variables in this study were student recognition of letter clusters within words and oral reading fluency. The independent variables were a word level intervention and a text level intervention.
There were 86 participants in grades two through five. All students were from a suburban school district. Students were equally divided into two groups. There were not any statistically reliable differences between the two groups in age, ability, sex, ethnicity, grade level, of socio-economic status. All students were identified as being “at risk” for reading difficulty and already entered into a state mandated Tier Two reading program. No students in the study were receiving special education services. The reading intervention was presented to small groups of students in the regular education classroom. However, each intervention was individualized for the specific student so the students were considered independent of their group. There was a total of approximately 44 sessions spanning about 3 months. Before beginning interventions, the students were given standardized tests. After the intervention, students were given the same standardized measure.

The word level group implemented the Rite Flight (Avrit et al., 2006) which stressed a specific phonics concept. Within each level of the curriculum were the following: a narrative passage emphasizing the phonics concept of the lesson, a few pages of with lists of various words (word study lists) presented in the narrative text, a page of sight words, and a page or more of phrases from the narrative reading. All participants in this group began at the Primer reading level. A pre-test to establish a baseline reading rate with the narrative text provided, was administered during the first session. During the sessions, students worked on individual word study pages by reading out loud to the instructor with as much accuracy and speed as they could for 30 seconds. The rate was recorded by the instructor and then the process was repeated for up to three different lists within a session. The student would continue to work with the same three lists until a stable reading rate was established. The researchers defined a stable reading rate as a comparable outcome for three successive sessions. Then, the student would read the page(s) of
word phrases 3 times. Lastly, the student would re-read the narrative text that was provided to establish a reading rate for a post-test.

The text level group also used a published reading program that included reading levels Primer through eighth grade. This program included recordings of the assigned passage to serve as a model for fluent reading. To establish baselines, students were pre-tested to find their beginning level. Teachers looked for a passage that the student could read approximately 60 words in a minute. Then, teachers set a reading rate goal of about 30 words more per minute. Students then read the same passage repeatedly or listened to the recording of the passage. Students practiced reading their assigned passage until their reading rate goal was met. At this time, the student read the passage one last time to the teacher to gather post-test data. The student then chose a different story on the same level and repeated the steps. Teachers had the flexibility to adjust rate goals upwards as a student’s reading rate increased within a level. Once a student’s reading rate was stable within a level, the student was moved up to the next grade level. No students moved more than one grade level during the study.

To analyze the standardized test data, a multivariate approach was used with repeated measures of data. ANOVAs were performed for each section of the standardized test. Raw scores and standard scores were assessed separately.

The answer to Ring et al. (2012) first hypothesis, that there would be a difference between the word level and text level training, no statistical difference was found on either raw or standard scores. However, they did find that there was a reliable effect for oral reading accuracy in the word level group on the norm referenced test’s raw scores. This effect was not evident on standard scores. Additionally, a multivariate analysis of standardized test measures
revealed no significant difference in sight word efficiency or phonological decoding, although, there was a significant increase raw scores in both areas.

Their second hypothesis stated that there would be beneficial effects on the students’ basic reading abilities. Multivariate test analysis uncovered no significant gains in either raw score or standard scores on any of the subtests. A follow-up univariate repeated measure ANOVA discovered a weak interaction effect between the two groups on word recognition and accuracy for the word level group. However, the gains were modest.

Their last research question involved identifying any individual qualities on treatment response. Characteristics specifically looked at were: age, sex, race, socioeconomic status, baseline levels of decoding and accuracy abilities, class size, and amount of time in treatment. Multivariate tests indicated a main effect on age. Younger students made statistically stronger gains in both raw and standard scores on many of the reading measures. This supports what other studies have found about age as a factor in learning how to read; younger students tend to acquire skills at a quicker rate.

Based on the standardized test results on both raw and standard scores, students in both word level and text level groups made similar modest gains on measures of timed oral reading accuracy and rate at both the text and word level. This suggests that students reading fluency was increasing at a faster rate than normative expectations. The strongest effect of this study was on oral reading fluency. This is consistent with other studies that have found interventions of repeated readings to be an effective intervention for oral reading fluency. Results from this study echo other research which has found that word-level training produced notable results in accuracy. This should be considered when developing interventions for students who have struggles in oral reading fluency when a student’s difficulty is in word recognition. Their
research also suggests that when developing response to intervention, the needs of the whole student need to be addressed. While components of these interventions may have been successful for some students, statistically significant results were not obtained for the entire groups. This indicates that student needs are varied, Therefore, interventions should revolve around each student’s specific needs. The word level intervention may be more beneficial for students struggling with word identification, but the text level intervention might be better suited for students struggling with prosodic reading. Educators should get to know the specific needs of each student when they are developing an intervention so that individual deficits can be targeted.

Lastly, Ring et al. (2012) research reiterates previous research that early intervention is imperative. Younger students in the present study made more significant gains compared to older children in the study. This means that intervention needs to take place as soon as possible once a reading delay is recognized.

Ring et al. (2012) provided valuable information about the components of an intervention for students who are struggling with oral reading fluency. Ritchy (2008) offers insight about how to identify students who are at risk for reading difficulties. Ritchy assessed the value of letter sound fluency (LSF) and nonsense word fluency (NWF) in kindergarten students on overall reading ability. Ritchy’s research compared and contrasted LSF and NWF in respect to their concurrent and projected reliability in the second half of kindergarten. It also sought to identify the reliability of LSF and NWF in recognizing at-risk children using reputable and adapted assessments. Furthermore, Ritchy predicted that response patterns would be important considerations in understanding student reading proficiency. Another expectation was that NWF would be a stronger predictor of reading ability than LSF. The dependent variable in this study
was the likelihood a student would be identified as “at risk” in reading. The independent variables were letter sound fluency and nonsense word fluency.

The LSF assessment measured the number of letter sounds correctly identified in one minute. Both lower and upper case letters were assessed. Students were expected to give the short vowel sounds. They could give either the hard or soft c and g sounds. The NWF assessment measured whether a student is able to use letter sound relationships in vowel-consonant and consonant-vowel consonant nonsense words. Two scores were given to the NWF assessment. Each correct sound earned one point. The first score is the number of correct sounds in one minute. The second score was a modified score (NWF-MS) which assessed the number of blended sounds in one minute. For example a NWF score would be given for saying /i/ /p/) and a separate score (NWF-MS) would be given for blending the two sounds together by saying ip. The NWF-MS score was used to establish word decoding and early reading verses letter sound knowledge alone.

There were 91 kindergarten students participating in this study. Forty-four percent of participants were male and 56% were female. The racial breakdown of the sample was as follows: 59.3% white, 38.5% African American, and 2.2% other races or multiracial. Participants were given the LSF and the NWF five times during the second half of kindergarten. Benchmark tests were administered every three weeks from January through May. The tests were administered consecutively. At the end of kindergarten, the Woodcock Reading Mastery Test-Revised/Normative Update (WRMT; Woodcock, 1998) subtest of Word Identification was administered. The WRMT subtests of Word Identification and Word Attack were given in the second half of first grade to 82 of the participants. The subtests were given to evaluate word
reading and decoding skills. In addition, two oral reading fluency measures were given. Students not tested at the end of first grade were unavailable for testing follow-up.

Results of the LSF, NWF, and NWF-MS were analyzed using a established benchmarks based off of Fuchs and Fuchs (2004) advisement of 35 letter sounds per minute for LSF and Good et. al.’s (2001) suggestion of 25 letter sounds per minute in NWF. The final benchmark test from kindergarten was used to indicate risk. To decide if the risk identification was accurate, the kindergarten risk status was compared to the standardized reading assessments at the end of kindergarten and the standardized reading assessments at the end of first grade, looking for students who fell below the 25th percentile on the WMRT. The LSF test correctly identified 87% of students at reading risk at the end of kindergarten, as indicated by being in the bottom 25th percentile on Word Identification. In addition, LSF identified 46.6% of students who were at or exceeding the 25th percentile on Word Identification. The NWF correctly identified 95.7% of students who fell below the 25th percentile and 64.7% of students who were at or above the 25th percentile. However, both LSF and NWF over identified students who were at risk with a false positive rate of 64.9% for LSF and 52.2% for NWF. Furthermore, both LSF and NWF under identified students at risk with a false positive rate of 8.8% and 2.2% respectively.

The effects of manipulating the benchmark cut-points were evaluated. The cut-points were adjusted, using either more stringent or liberal qualifications. To do this, the cut-point scores were adjusted by 5 letter sounds in each test (the liberal cut-point was plus five sounds and the stringent cut-point minus five sounds). When the cut-point was more liberal, more students were identified as at risk, the false-positive rates increased, and the false negative rates decreased. When the cut-point was more stringent, the correct identification of at risk students decreased, the false positive rates decreased, and the false negative rates increased. Overall, the
results of the adjusted cut-points support that that cut-points established by Fuchs and Fuchs (2004) and Good et. al (2001) were the best indicators of identifying students at-risk for reading difficulty. The adjusted cut-points did not yield more accurate classification rates.

During the kindergarten assessment period, there was a steady increase in the number of students who began to blend sounds into words during the NWF-MS tests. The way students answered test items was found to be an important predictor of later reading ability. Interestingly, as the test sessions progressed, the number of non-sense words read within a minute decreased. This could be due to the fact that it takes longer to sound out a word and reproduce the sounds as a complete word, compared to simply saying the letter sounds. Moreover, there was some variability on how students approached the NWF test. Ritchy (2008) noted that some students would blend words together on one assessment, and then cease to do so on the next. She also notes that some students never sounded out the word and only gave blended responses. Some students only gave each sound; whereas some gave each sound then produced the whole word. Lastly, some students gave a combination of providing each sound on some items and whole blended words on other items. The present study found that failure to blend the sounds into a word did not consistently result in being at risk for reading difficulties. This indicates that it is essential to consider how students behave during NWF assessments across a number of sessions.

Results of this study confirm that both LSF and NWF are similar predictors of reading difficulties. This is in contrast to the prediction the NWF would be a stronger predictor of reading ability. Both assessments identified almost all the same students as being at risk. Both assessments had high false positive rates, which over identified at risk students. Lastly, results from this study did support the hypothesis that the way students answered the NWF test items predicted their reading proficiency. Students who took the time to sound out each word scored
better than students who did not. This suggests that decoding skills might be imperative to early reading success. Teachers of early elementary students should take these results into consideration when determining who might be an at risk reader and designing interventions for struggling readers. Additionally, if NWF or LSF is a testing method the teacher chooses to employ, he or she should be aware that there is a tendency to over-identify students who are at risk. Providing service to a large number of students could exhaust limited resources. However, not identifying an at risk reader could compromise their reading ability for years. In sum, the results of this study provide valuable insight on reading skills that promote or hinder reading success in early elementary school.

Ritchy’s findings highlighted the importance of oral reading fluency being an important factor to later reading success. Applegate, Applegate, and Molda (2009) elaborated on this finding by examining how oral reading fluency is related to comprehension. It is well noted that students transition from learning to read to reading to learn around third grade. In order to read to learn, students must comprehend what they have read. Their study aimed to explain if fluent readers are strong at reading comprehension as measured by responding thoughtfully to texts. The independent variable in their study was fluency and the dependent variable was comprehension.

Participants included 171 students between second and tenth grade in the eastern United States. Students were selected for this study based off of their notably high fluency skills as reported by the child’s teacher and parent. In addition, the researchers administered a fluency test and the students had to score at or above the cut point of strong fluency skills determined by the researchers. The majority of students in their study were white (86%) and the remaining 14% of participants were from minority groups. The majority of participants attended public schools
(109 participants), 45 participants went to parochial schools, 17 participants went to private schools, and the remaining two participants were homeschooled.

The researchers used the Critical Reading Inventory-2 (CRI-2; Applegate, Quinn, & Applegate, 2008) to measure reading comprehension. The CRI-2 has a fluency rubric that measures reading fluency. The CRI-2 measures reading in three ways: 1) text-based- literal comprehension questions and easy inference questions 2) Inference- ability to make complex connections between the text to derive meaning 3) Critical response- ability to evaluate broader themes and issues and require the reader to analyze, express and defend ideas, and respond to the text based on their individual experiences and values. Over 60% of the CRI-2 tests for higher level comprehension.

Participants in the current study read two passages from the CRI-2. The first passage was read aloud, the second was read silently. After reading the passage, students retold what they read, answered 10 open-ended comprehension questions, eight text based comprehension questions, and 12 higher level comprehension questions (Inference and Critical response).

The researchers classified the students scores as “advanced comprehenders”, students who scored 85% or higher on the CRI-2, “proficient comprehenders”, students who scored between 63%-80%, and “struggling comprehenders”, students who scored 58% or below. Thirty percent of the sample scored at the advanced level, 36% scored at the proficient level, and 34% scored at the struggling level. Their results go against the researchers’ hypothesis that high fluency goes hand in hand with strong comprehension skills. Upon further analysis, the researchers found that 29 of the 57 struggling readers had deficits with higher level comprehension. These readers scored well with the retell questions but could not synthesize what they read in the text.
The results of Applegate, Applegate, and Molda’s study suggest that many teachers are basing student reading ability on fluency alone. Teachers may neglect comprehension as they are instructing students on how to read. Arlington (2001) found that the majority of classroom assignments had students simply remembering or reciting details and very few assignments requiring students to think about and draw connections about what they read. The findings from this study are important because it suggests that fluency and comprehension are linked. Moreover, educators need to be acutely aware that just like fluency is taught, thoughtful response to text is a skill that needs to be explicitly taught. Teaching high level comprehension needs to be a priority for students to reach their full reading potential. Lastly, fluency lends itself to comprehension because students are able to read quickly, accurately, and with expression so fluency is crucial for strong reading skills.

In review, the four studies discussed detailed the importance of reading fluency in elementary school children. Therrien et al. (2011) evaluated the effectiveness of a reading intervention with repeated reading and without repeated reading. The Results from Therrien et al. suggested that both methods were effective and that providing corrective feedback was the most important variable in increasing oral reading fluency. Ring et al. (2012) echoed the findings of Therrien et al. supporting repeated reading of a text as an effective way of increasing oral reading fluency. Ring et al. also found that word level training is an effective strategy at increasing oral reading fluency. Results from their study showed that younger students in an oral reading fluency intervention made faster gains than older students. Ritchy (2008) provided evidence that fluency of letter sounds and nonsense words accurately predict students who are at risk for reading difficulty. NWF and LSF in kindergarten provide the foundation for reading fluency. Finally, Applegate et al. (2009) found considerable evidence that fluency effects reading
comprehension. In their study the concluded that in effort for students to fully take advantage of the benefits of being a fluent reader, there needs to be an emphasis on higher level comprehension. Taken together, these studies emphasize the importance of oral reading fluency in the elementary years. These studies provide valuable insight into effective strategies that promote reading fluency in young readers.

Phonemic Awareness and Phonics

The previous section detailed the importance of fluency for students as they progress through elementary school. This section highlights the importance of phonemic awareness and phonics instruction. It is necessary for students to have phonemic awareness and phonics skills in place in order to fluently read words. Phonemic awareness can be described as the ability to break words down by each sound. Phonemic awareness tasks can be completed without breaking the written code of reading such as rhyming or switching sounds in a given word to make a new word. However, with phonics skills the written code must be broken as it requires students know and match letters with sounds and use this information to decode words. This section focuses on the importance of phonemic awareness and phonics as a foundation in learning how to read.

Wood (2000) found that the ability to rhyme and delete sounds in words strongly influenced overall reading ability in children. There is a considerable body of evidence stating that the ability to rhyme is a chief indicator of reading ability. Therefore, understanding how students learn to rhyme words is of high importance. Wood hypothesized that phonemic awareness allows children to acquire rhyming skills. Conversely, some speculate that children can use orthographic analogies, words that share a common rime but different onset, to assist with word identification (Goswami, 1986; Goswami, 1988). In Woods’ study, children learning how to read were assessed on, “rhyme detection ability, alliteration, phonemic deletion,
vocabulary, memory, and ability to read unknown words by analogy” (p.7). The independent variable in this study was the ability to rhyme. The dependent variables were orthographic analogy ability, vocabulary, short-term memory, reading ability, and phonemic awareness skills (alliteration and deletion).

Sixty-eight students (average age 5.8 months) from the United Kingdom participated in this study. There were 38 boys and 30 girls. In order to qualify for the study, participants had to be able to read one word off of a selected list, but could not read so well that they could read any of the words from the orthographic analogy test. Students were given a standardized vocabulary test. In order to participate in the study, they could not have a vocabulary score lower than one standard deviation below the mean. All testing took place in a quiet area of a school. Students underwent testing in two or three testing sessions to reduce overexertion.

Participants were assessed on their knowledge of rhyme using a norm referenced test. During the assessment students were asked to recite a nursery rhyme. In addition, they were given a set of three words. Two of the words rhymed, one did not. They had to identify the word that did not belong. Students also were presented a set of three words where two of the words had the same beginning sound, and one did not. Students were told to identify the word that did not fit.

Additionally, students took a short term memory test. The child was told a string of numbers ranging from two to nine items. In order to earn a point on this measure, they had to recite every number back in the correct order. To test for orthographic analogy ability, participants were presented a “clue word” written on a card. The student was told the word. Then, the student was presented a different card with a word on it. The child was asked to guess what the new word might say based on what the previous word said. No other direction was
given to ensure that the student’s answer reflected their ability to use orthographic rhyming, not simply follow a procedure. A vocabulary test was administered that asked students to select the picture that corresponded a given word. Four pictures were presented side by side, with only one correct answer. Furthermore, students were tested on their ability to delete either the first or last sound from a one or two syllable word to create a new word. Lastly, students were tested on word identification skills by reading a set of increasingly difficult isolated words until eight consecutive errors were made.

Results indicated strong correlations between orthographic analogy, phoneme deletion, and reading. A statistically significant correlation between orthographic analogy and reading was found when controlling for phoneme deletion. In addition, results indicated that rhyme awareness was strongly related to the use of analogies, phoneme deletion, and reading skills. There was also a statistically significant correlation between short term memory and the orthographic analogy measure. Additionally, there was a noteworthy correlation between phoneme deletion, reading ability, and rhyme detection. Short-term memory and rhyme detection were significantly correlated with vocabulary.

In order to assess the degree of which the testing could account for the participants overall reading attainment, forward stepwise multiple regressions were conducted. Forward stepwise multiple regressions take the variable with the greatest significant correlation ($R^2$) and remove it from the equation. Then, all of the remaining variables are recalculated and the next significant variable is used. This process is repeated until there is only one variable left and no more calculations can be made. A significant contribution to the difference in test scores was found in two variables: orthographic analogy (54.4%) and phoneme deletion (7.7%). A comparable method was used to determine which variables were most closely related to
orthographic analogy measure. Results showed that it was reading ability and phoneme deletion. Rhyme awareness was not found to make a significant difference once orthographic analogy skills and reading ability were taken into account.

The results of Wood’s (2000) study suggested that rhyming is associated with the ability to make connections to orthographic analogies when reading. However, phoneme deletion is more closely linked with the use of orthographic analogies. Orthographic analogy use was the largest contributor to the difference in reading scores, followed by phoneme deletion which made a small, but significant contribution. Results of this study suggest that the use of rhyming promotes early reading skills by increasing phonemic awareness and by advancing the use of orthographic analogies. This lends further support to the importance of phonemic awareness as a foundational early literacy skill.

Additionally, short term memory was found to be a significant indicator of reading ability. This could be due to the fact that many of the tests the participants took required a high degree of memory. For example, in the phoneme deletion task, students had to remember the initial word as they manipulated it to make a new word. Similarly, the orthographic analogy task, had students remember an initial word and make connections to the second word presented.

Based on the findings from Wood (2000), early literacy should support a variety of complex phonemic awareness activities. Books and stories that support rhyming may facilitate phonemic awareness and phonological awareness. Similarly, nursery rhymes could prove to be beneficial. In light of the fact that short term memory is significantly related to early reading success, activities that exercise memory should be incorporated into children’s routines. Wood’s study added to the body of research that highlights the importance of early reading skills.
Phonemic awareness and rhyming are critical in the acquisition of breaking written code when learning how to read.

Just as phonemic awareness is clearly an important foundational skill for young readers, the ability to decode new and unfamiliar words by using phonics is an essential foundational skill in reading. Foorman, Francis, Fletcher, Schatschneider, and Mehta (1998) examined the effect of teaching the alphabetic code and effects of phonological processing on growth in word reading in students who are struggling readers and receive Title 1 services. Their study explored how to teach the early literacy skills necessary to break the written code that struggling readers have difficulty with. Foorman et al. conjectured that students who received explicit instruction in the alphabetic principal with an emphasis on letter sound correspondence would show more reading growth over the span of one school year compared to students who receive less explicit instruction in the alphabetic code. They also hypothesized “that this growth in reading skills would be moderated by initial phonological processing skills” (p. 39). The independent variable in this study was reading growth. The dependent variables were the different reading programs implemented to examine which program had the greatest effect on reading growth as well as age, IQ, tutoring, teacher attitudes, student attitudes. In the present study these reading programs were: direct code instruction (DC), less direct instruction in spelling patterns embedded in connected text (embedded code (EC)), and indirect or incidental instruction in the alphabetic principal embedded within text (implicit code (IC)). IC group consisted of two different curriculums, one supported by the district (IC-S) and a different researched based curriculum that was comparable to the district’s curriculum (IC-R). The IC-R, DC, and EC groups were trained in high quality sessions conducted by the research staff. Training for the IC-S group was conducted by the district.
Participants in this study included 285 first and second graders who qualified for Title 1 services in an urban school district consisting of 19 elementary schools. Sixty-one percent of participants were male and 49% were female. The racial composition was 60% of participants were African American, 20% Hispanic, and 20% white. Students were divided into groups based on the reading program that they received. These groups did not differ in demographic make up. Due to low literacy skills, both first and second graders received instruction at the first grade level. Each group received 90-minutes of reading daily in one of the program conditions (DC, EC, or IC). There were 14 DC teachers, 20 EC teachers, 19 IC-R teachers, and 13 IC-S teachers. Compliance checks took place to monitor the teacher’s implementation of the curriculum. In addition to the classroom teachers, an additional 28 teachers delivered either one-on-one or small group tutoring sessions that either matched or was a mismatch to the classroom curriculum for 30 minutes each day.

The DC group emphasized a balance between phonemic awareness, phonics, and “literature activities” using an evidenced based curriculum. The first 30 minutes of the lesson were activities in phonemic awareness. Phonics strategies were introduced using sound spelling cards, alliterative stories, and vocabulary words that coincided with the rule being taught. Decodable books were also presented. Spelling was aimed at moving students from phonetic spellers to conventional spelling, and writing workshop activities were introduced midway through the year.

The EC group received instruction emphasizing phonemic awareness and spelling patterns in conventional books using an evidenced based program. Teachers were provided a list of sequenced spelling patterns and a list of books that included those spelling patterns. Whole class instruction included shared writing and reading, choral or echo reading, and guided reading.
Teachers would introduce a spelling pattern by providing a word (e.g. cat). Then, they would delete the beginning sound which would reveal the spelling pattern of focus (e.g. at). Students would help substitute the beginning sound for different initial sounds thus making new words. Students would identify these words during whole group activities, small group activities, or during independent work times.

The IC instructional group was the district implemented curriculum which stressed a print rich environment. The idea behind this curriculum was that the teacher was a facilitator of student learning rather than the director. This was a child centered curriculum where the environment was always changing to meet individual student needs. Activities in spelling, reading, and writing were intended to facilitate student learning and provide a context for phonics. Students kept a portfolio of work rather than taking norm referenced tests. Instruction in the alphabetic principal was a by product of the classroom activities, not an integral part of instruction.

Student reading progress in vocabulary, phonological processing, and word reading was measured four times throughout the year. Norm referenced tests were used to monitor progress. At the end of the year, each child was given an intelligence test and standardized reading and spelling tests. School attendance, measures of self-esteem, reading attitudes, reading experience, behavior, and environment data was also collected during the spring. Teachers also completed surveys to collect relevant educational information about the students in her class.

Teacher compliance was very high throughout this study. Of the 53 classroom teachers, 49 met compliance measures. The four who did not meet compliance were included in the study to demonstrate variance in teaching styles despite teacher training. Teacher attitudes toward the reading program they taught differed in the degree of how much they liked the program. DC
teachers were more likely to recommend their program to the district and to colleagues. There was no difference in teacher attitudes about recommending their method of instruction for all students or students receiving special education services.

The IC-S and IC-R groups were compared to provide information on the significance of teacher training throughout the present study. Comparison of the IC-R, EC, and DC group gave essential information about the effectiveness of each program controlling for teacher training. Individual and small group tutoring sessions were used to determine if matched or mismatched condition yielded different results. However, results of the individual tutoring or small group tutoring did not indicate any statistically significant differences.

On the other hand, an analysis on phonological processing found statistically significant differences between racial groups and individual differences in age and verbal IQ. African American students had statistically significantly lower scores in phonological processing than the sample overall. Age was also found to be statistically significant regarding phonological processing. Older students had higher end of the year scores but improved at a slower rate than younger students. Lastly, students with higher IQ scores had higher phonological processing skills, however, the growth of older slowed at the end of the year. Foorman et al. (1998) also found that students in the DC group had statistically significantly higher end of the year scores than the EC group and the IC-R group. The EC group showed a stable rate of growth whereas the IC-R group showed a slowing of phonological growth at the end of the year.

Analysis in word reading growth found no statistically significant effect between racial groups. Although, the effects on age and IQ were comparable to those found in phonological processing. Students in the DC group improved in word reading at a quicker rate than students in the IC-R and EC group. However, results were only statistically significant between DC and IC-
R group. The DC group’s rate of improvement was 10.7 words faster than the IC-R group and 8.6 faster than the EC group. Upon further analysis, it was discovered that a rather large group of students in the EC, IC-R, and IC-S groups did not show word reading growth at all; “approximately 46% of the IC-R children, 44% of the EC children, and 38% of the IC-S children learned at a rate of 2.5 words or less per school year on the (reading growth measure) compared with only 16% in the DC group” (p. 45). This means that students in the DC group were 3.6 times more likely to read one word by the end of the year compared to the IC-R group and 5.2 times more likely than the EC group. Also of high importance, Foorman et al. (1998) found that students who started the school year with the lowest phonological processing skills demonstrated the least growth in each reading group except for the DC group.

Analysis of reading vocabulary found that there was a statistically significant difference in vocabulary acquisition between age and race. Older students had higher vocabulary growth. Furthermore, students who were Hispanic had the least amount of vocabulary growth. Interestingly and importantly, there was no significant effect on vocabulary acquisition between the instructional groups.

A post hoc test, which identifies patterns, of the instructional groups based on the end of the year standardized tests found that the DC group had statistically significant higher decoding skills than the IC-R and EC groups. The DC group also had higher passage comprehension than the other two groups but this difference was not statistically significant. There was no significant effect between curriculum groups on spelling or on a formal reading inventory.

All of the groups had comparable school attendance, self esteem, behaviors, and family situations. However, the groups differed significantly in reading attitudes. The IC-R group had more favorable attitudes toward reading compared to the DC group. Additionally, the IC-S group
was found to be significantly different than the other three groups. The IC-S group had statistically significantly higher activity ratings based on teacher ratings than both the DC and IC-R groups. The IC-S group also had statistically significantly lower adaptability scores which measured ability to tolerate change, transition between activities, getting upset, and calming down. The IC-S group had statistically significant poorer social skills compared to the IC-R group. Lastly, the IC-S group was found to have statistically significant lower academic ratings compared to EC group and statistically significant more problems using language (expressing though, difficult to understand) compared to the IC-R group. The IC-S teachers reported more behavioral problems compared to the DC, EC, and IC-R teachers.

The results of this study provide strong evidence that direct instruction in the alphabetic code develop early reading skills at a faster rate than less explicit instruction. Students with the lowest phonological processing skills also showed more improvement than the other groups. Additionally, students in the DC group had the highest comprehension scores out of all the groups, ranking in the 45th national percentile in comprehension compared to the 35th and 33rd of the IC and EC group respectively. Decoding scores were also the highest in the DC group. Therefore, students who received direct code instruction in the alphabetic principal were better phonological processors, decoders, and better at comprehending than the EC and IC groups. Vocabulary acquisition and spelling achievement were the same for all of the groups which implies that vocabulary developed at the same rate regardless of the program. One important fact is that age had an effect on reading growth rate. Students in the second grade showed faster gains initially but then tapered off later in the year. This could indicate that alphabetic instruction is most important in younger children who are still learning the foundations of reading. In light of the fact that all the students in every instructional program were culturally and linguistically
diverse, the increased in reading growth for the DC group was the result of the reading program. All of the students in this study received Title 1 and were at risk for reading failure. Findings from this study should be considered by teachers and districts when selecting reading programs with students who have low socio-economic status and who are struggling readers. Direct code instruction appears to have the largest benefit; only 16% of students demonstrating no growth over the year compared to 46% and 44% of the IC and EC groups respectively.

While the DC group had the largest overall reading improvement, reading attitudes by students and teachers should also be considered when selecting a program. Student attitudes towards reading were less positive in the DC group than the EC of IC groups. Students in the DC group did not like reading even though they were the best at reading. In the future if these negative attitudes toward reading were to continue, their higher reading scores could decrease because they do not find joy in reading. In addition, the IC-S group described more behavioral, self regulation, emotional, and activity level problems than the other instructional groups. This could be because the district did not provide in depth enough professional development to help combat some of these problems. The IC-R group who taught reading using the same philosophy did not report these problems. Finally, teachers in the DC group were more likely to recommend their reading curriculum to the district compared to the EC group and more likely to recommend their curriculum to a colleague than the EC or IC-R group. Results of this study overwhelmingly state that the DC group had more favorable outcomes for student reading achievement and teachers reported higher levels of satisfaction with the program.

The study by Foorman et al. (1998) provides strong evidence that direct instruction in the alphabetic principal and decoding will increase overall reading skills in young readers. A study by Joseph (2002) expands the research supporting the need for explicit phonics instruction for
students struggling with breaking the written code. Joseph looked at the effectiveness of combining word boxes and word sorts as a means for improving spelling and word identification skills for students with mild cognitive impairments. Both word boxes and word sorts have been found to be effective tools at improving decoding skills in struggling readers. Both strategies provide spelling and phonemic awareness instruction as well as provide opportunities for modeling, repeated exposure, manipulation of words, feedback and support. Word boxes are made up of a rectangle divided into the number of phonemes a word has. Students are instructed to move a manipulative into each box as they say each sound in a given word. Word sorts consist of providing a child a set of words that they are instructed to group based on common sound or spelling patterns. The study by Joseph sought to quantify change in reading performance with the combined use of word boxes and word sorts over time with students who had mild cognitive impairments, when the strategies were applied. The independent variable was reading performance. The dependent variables were as follows: the number of correctly read words, on probes, the number spelled words on probes, word box instruction, word sort instruction, and amount of time receiving instruction.

There were three participants in this study who attended an urban school in the Midwest. Two of the students were African American and one student was Caucasian. Student’s ages were between 9:5 and 10:6 years old. All students were receiving cross categorical special education instruction. Students were selected for this study based on the diagnosis of a cognitive disability and known difficulty with reading and spelling vowel-consonant-vowel words. Students were instructed individually in a small classroom at the school they attended.

A set of 20 word identification and 20 spelling “probes” were created to evaluate student performance. Each probe consisted of 10 three to four letter words representing at least three of
the short vowel sounds. None of the probes were exactly the same, however, the same word could appear on more than one probe. A baseline was established for each student by randomly selecting a probe and administering a reading and spelling test. The same probe was used for both reading and spelling. Students had 60 seconds to correctly read and spell a word. Results of the assessment were recorded.

After the baseline was established, intervention sessions took place daily for 40 minutes. Each day, a new probe was selected for the word box and word sort activities. For word box activities, students were provided a magnetic board that included a word box for three phonemes and three magnets. The teacher said a word slowly and instructed the student to move a magnet each time they heard a new sound. Then, the teacher replaced the magnets with magnetic letters representing each sound in the word. The letters were placed under the corresponding box. The student was instructed to sound out the word while moving the letter into the box. Lastly, the student was asked to write the letters of the word with a magic marker in the correct box. This was repeated for each of the words in the probe.

After completion of the word box activity, the student would then engage in a word sort activity. During the word sort activity, the same words were used as in the word box activities. The teacher provided the student with a list of words. The student would read through each word. After reading each word, the teacher presented a shuffled stack of the same words. Then, the student was instructed to sort each word based on the short vowel sound. If the student did not place the word in the correct place, the teacher would ask, if he or she selected the correct category. If the student did not self correct, the teacher would move the word into the correct category and explain why she did so. Students were provided with verbal praise when they correctly placed a word.
At the end of each session, students were given a reading and spelling test based off of the day’s words. Spelling and reading assessments were given in a counterbalanced order during instructional sessions. The method was the same as baseline procedures. After completion of the tests, the students were not provided any sort of feedback on their performance. In order to measure maintenance of learned skills, a randomly selected probe was administered each day to test reading and spelling beginning the day after the intervention ended. Students were not given any feedback on their performance on the probe.

Results of this study indicate that all students made improvement in reading and spelling relative to the baseline tests. Two of the students demonstrated gradual gains whereas one student showed immediate gains in both spelling and reading. Students tended to do better in spelling than reading, however, post-test scores for both reading and spelling were between 95%-100%. Pre-test scores ranged between 20%-50% for reading and all students spelled 20% of words correctly on the pre-test. Maintenance data indicates that students were able to retain much of what they learned during the intervention. Results form this study indicate that students benefitted greatly from the word box and word sort intervention.

Results of this study indicate that explicit instruction in phonics is needed for struggling readers. Furthermore, results suggest that repeated exposure to words in multiple contexts is essential for struggling readers to gain new skills. This is likely due to the fact that these activities support phonemic awareness, word reading, and spelling, skills necessary for reading achievement.

The studies by both Foorman et al. (1998) and Joseph (2002) both highlight the importance of direct code instruction when teaching students how to read. Both studies found that students who had direct instruction in the alphabetic principal where able to read more
words and showed the most reading improvement. A study by Juel and Midden-Cupp (2000) sought to determine where the emphasis should be when teaching young students how to read. They wondered what the best method was for teaching young students how to recognize words. By the time students go into third grade, they are expected to know and recognize over 80,000 words (Carrol, Davies, & Richman, 1971; Adams, 1990). Undeniably this is an enormous task for an eight or nine year old to undertake. Previous research from Gough and Juel (1990), and Juel (1994) found that over 500 hundred spelling sound rules were needed to decode at this level, however, even the most complete phonics curriculums explicitly taught about 90 of these rules. The purpose of the present study was to evaluate word recognition instruction and how the different types of instruction influenced the foundation of literacy in students. In addition, they evaluated how word recognition instruction was incorporated into the curriculum. The independent variable was student reading achievement. The dependent variable was teacher instruction.

The researchers identified four first grade teachers with ample experience as classroom teachers. Each teacher was well regarded by their administrators. All four teachers taught at schools with comparable demographics in the southeast United States. Approximately 60% of students at each school were African American, 36% were white, and 4% were from other racial backgrounds. About 70% of students at these schools qualified for free or reduced lunch. Teachers in this study had a sparse amount of pre-primer level books available to them for classroom reading instruction.

The researchers observed literacy instruction in each classroom for at least an hour weekly. A narrative record was kept in each classroom via laptop computer focusing on classroom activities, literacy materials, and instructional strategies teachers taught students for
reading complete words, and word chunks. To evaluate how instructional style affected student’s reading growth, the researchers assessed the student’s levels in phonemic awareness, alphabetic principal, “concept of word,” and letter sound correspondence in September, December, and May. Additionally, they evaluated the student’s ability to read words using a standardized measure and assessed ability to read words that they had received explicit instruction in from their teacher. During the December and May assessments, the researchers employed a “think-a-loud” procedure to determine the strategies students used to read words in both passages and by themselves.

Each classroom used a method of teaching word recognition. In the first classroom, word recognition took place mainly through a whole group word wall activity. Students would chant new words and write a new word many times. There were three leveled reading groups and instruction in all three groups neglected word units. The teacher did instruct on initial consonants and whole words. To teach word identification, students were encouraged to employ context clues, predict, re-read or spell the word, and to use the word wall. When a student struggled with a word, the teacher usually told the student the word. This teacher was never observed modeling how to sound out a word. The second classroom teacher infused literacy instruction with poetry in effort to compensate for the few books available for struggling readers. This teacher created charts with poetry and mini-books with the poems for each student. During literacy instruction, she had many activities (e.g. word sorts) were students could manipulate the words in phonemic awareness and phonics instruction. Within the three leveled reading groups, activities were catered to the needs of the students. The teacher frequently modeled how to chunk words into their onset and rime for students in the lowest group. This teacher also insisted that students track words as they read. In the third classroom, there were many “trade” books. The teacher had more
emphasis on comprehension and discussing that they read compared to the first two classrooms. In all three leveled reading groups, students spent a notable amount of time journaling and writing. Peer coaching to encourage word recognition was emphasized by this teacher. Students would provide clues to words when a student struggled with word recognition. This teacher did not adhere to a specific curriculum to teach reading. Instead, she used “trade” books and taught phonics as it was needed. Thus, direct phonics instruction did not often occur in this classroom. Lastly, the fourth teacher was the most phonics driven of the four teachers. Additionally, she had strict behavior requirements of her students. Her instruction differed in the fall compared to the spring semester. Each of her three reading groups was differentiated based on student needs. The lowest reading group spent a notable amount of time in phonics instruction until February. Phonics instruction occurred mostly during the fall and there was more of an emphasis on comprehension and vocabulary during the spring. This teacher, like the second teacher, made the students track words as they read them.

Results of this study indicate that student reading growth was affected by instructional style. An analysis of covariance revealed significant differences on passage reading in May. In addition, follow-up pair wise contrasts suggest that student reading achievement was “significantly different from that in every other classroom” (p. 334). At the May assessment period, average student reading achievement in the first classroom was at a pre-primer level, average classroom achievement in the second classroom was at an ending first grade level, in the third classroom students ended at a mid second grade level, and the fourth classroom students ended at a late second grade level. Additionally, differences existed between reading groups in the different classrooms. There were no significant differences between students in these groups at the beginning of the year. However, there was a considerable difference between the reading
groups at the end of the year. Students in the lowest group in the fourth classroom were reading at an end of first grade level (on grade level) at the end of the year. Students in the low group in the second classroom faired the next best, followed by the first classroom. Students in the low group in the third classroom left first grade hardly able to read. However, students in the third classroom who began the year as average to strong readers were likely to make outstanding reading growth as evidenced by nine students in that classroom exiting first grade one standard deviation above the mean in reading achievement.

Results of this study suggest that the poorest readers in first grade had the best chance of reading achievement if they were in a reading group that has explicit phonics instruction and a teacher who modeled reading strategies (e.g. word chunks, onset and rime, context clues). The researchers also note that student tracking of words as they read also helped overall reading achievement. The fourth classroom was the room where students made the most overall growth and that teacher had a firm grip on classroom management. Classroom management is an integral part of reading instruction as students are more likely to be on task and engaged with reading activities. This research also suggests that students who are struggling with reading should not be given clues to help read words. However, this is a highly effective strategy for students who already have a solid reading foundation coupled with vocabulary and comprehension instruction.

Educators should consider the results of this study when designing classroom reading instruction. Small group instruction is an important part of learning how to read. Each activity in the small group needs to match the needs of the students in that group. Furthermore, explicit instruction of phonics skills was extremely beneficial to students, especially those who were struggling readers. In light of this information, it is imperative that educators do not simply
In conclusion, this section examined the importance of phonemic awareness and phonics skills in struggling readers. The study by Wood (2000) supported that letter sound recognition is important in early literacy skill development. Wood’s study found that the ability to rhyme and delete phonemes had a positive relationship with overall reading ability in young children. Children who rhyme are able to make complex orthographic connections between words. Foorman et al. (1998) investigated the role of phonics instruction in early reading success. They found that in order to break the code of written language, students must be provided explicit instruction in the alphabetic principal. Their study yielded considerable support for direct code instruction. All students, including those who started the year the most behind proved to make impressive gains in decoding and comprehension when explicit instruction of the alphabetic principal was taught. Furthermore, Joseph (2002) supported explicit code instruction for struggling readers through the use of word boxes and word sorts. Student’s with mild cognitive impairments made notable gains in both spelling and reading CVC words because of the explicit instruction in phonics. Lastly, Juel and Midden-Cupp (2000) found that the best instructional method in teaching students to read whole words in elementary school was explicit phonics instruction. Their study looked at four different classrooms with varied instructional approaches and found that the early readers who faired the best were those who received direct phonics instruction.
instruction. In sum, these studies suggest that struggling readers need phonemic awareness and phonics skills in order to read words and become capable readers.

Conclusion

The first section of this chapter focused, factors influencing early reading skills. In the second section of this chapter, the importance of reading fluency was outlined. Finally, in the third section of this chapter the importance of phonemic awareness and phonics skills were discussed. Taken together, there is a vast body of research outlining the skills needed for reading success in elementary school. The study by Petrill et al. (2010) discussed the importance of environmental influences impacting beginning reader’s acquisition of literacy skills. Furthermore, their study found evidence suggesting genetics play a central role in how students learn to read. Lukin and Estraviz (2010) also looked at factors that effect children’s ability to learn how to read. Their study revealed that language skills must be a consideration when teaching children to break the alphabetic code. Furthermore, the study by Foster and Miller (2007) identified two different literacy gaps: a phonemic awareness and phonics gap before grade 3, and a comprehension gap after grade 3. Children who struggled with basic literacy skills such as phonemic awareness and phonics would catch up to their non-struggling peers, but by the time that they did so, a second comprehension gap was exposed. Comprehension is undoubtedly an important skill as evidenced by the study by Applegate and Applegate (2010). Their study found that struggling comprehenders tended to feel less motivation to read.

The second section detailed the body of evidence suggesting that fluency is essential to early reading success. The study by Therrien et al. (2011) evaluated the effectiveness of a reading fluency intervention. Results from their study found that the chief indicator of increased oral reading fluency was providing students with descriptive feedback based on reading errors.
Students in their study had to evaluate their own reading which also might have contributed to increased oral reading fluency because students were able to recognize their mistakes. The results from Ring et al. (2012) found support that both repeated reading of a text until oral reading fluency is attained and word level instruction can be effective in increasing oral reading fluency. Another important finding from their study echoes other research which states that early intervention in reading fluency is imperative for continued reading success. In addition, Ritchy (2008) lends support to early intervention. Ritchy found that letter word fluency and nonsense word fluency are predictors of reading difficulty as early as kindergarten. Finally, Applegate et al. (2009) found there are direct links from fluency skill to reading comprehension abilities. One caveat of this finding is that students need to be explicitly taught high level comprehension abilities.

In the third section of this chapter, the importance of phonemic awareness and phonics skills were discussed. Wood (2000) found that phonemic awareness abilities such as rhyming and phoneme deletion were essential for early reading success. Wood specifically found that children who know onset and rimes were able to apply their knowledge and make complex connections to written text. Foorman et al. (1998) found that explicit instruction of the alphabetic code is needed for young readers in urban settings to learn how to read words. Their study found that direct code instruction greatly benefitted all readers especially those who began the year with the lowest reading skills. Joseph (2002) echoed the findings of Foorman et al. Joseph’s study found strong support for direct alphabetic code instruction through the use of word boxes and word sorts with struggling readers who had mild cognitive impairments. All students in the study made impressive reading gains. Finally, Juel and Midden-Cupp (2000) evaluated four classrooms employing different teaching methods. Their study found that struggling readers
benefitted the most from direct phonics instruction. Each of these studies provides important insight into the intricate task of learning how to read. Clearly, young children have a difficult task in learning how to break the code of written language to become proficient readers.
Chapter Three: Procedures of Case Study

Introduction

The purpose of this study was to increase the oral reading fluency of a second grade student. Oral reading fluency can be defined as the ability to read without conscious effort and with speed, accuracy, and expression. A variety of strategies were used to achieve increased oral reading fluency including phonemic awareness instruction, phonics instruction, word identification practice, repeated readings, self assessment, modeling and corrective feedback. Reading fluency is an important skill needed for reading success as it allows the reader to quickly process words and make sense of the text. More specifically, fluency is an essential component of comprehension. Fluent readers are able to make sense of, respond to, and identify with the texts that they read.

Student Profile

Annie was 8 years 5 months old at the beginning of the study. The student had just completed second grade in June of 2012 and will begin third grade in September of 2012. Annie had an amiable disposition. During sessions she was compliant and attempted all tasks, including challenging tasks. Annie was thoughtful during sessions and rarely asked for help. At times she needed to be prompted to ask for help so she could understand the concept being taught. Annie was often tired at the beginning of sessions but perked up during the course of the intervention. As the sessions drew to a close, Annie became increasingly nervous during times when she was expected to read aloud. She told the instructor it was because she wanted to do her very best. Overall, Annie was invested in the intervention the instructor had planned for her.
Annie attended school regularly since pre-kindergarten. She attended one school in an urban public school in Southeastern Wisconsin. She completed second grade in June 2012 at a small (less than 350 students) urban elementary school. The school she attended serves pre-kindergarten through fifth grade. Most students at this school are African American, comprising 90.1% of the student body. Five percent of students are white and the remaining 4.9% are of Hispanic, American Indian or Asian decent, or students who are of two or more races. The majority of students, 96.9%, come from economically disadvantaged backgrounds. There are a notable amount of students, 16.4%, with disabilities. According to the 2011-2012 Wisconsin state tests (WKCE) results from the school Annie attends, 52.4% of third graders, 46.4% of fourth graders, and 71.8% of fifth graders were proficient or advanced in reading.

Annie was identified as a struggling reader. She attended a community learning center beginning in February of 2012. Students who participate in the community learning center’s reading program receive intensive tutoring for 90 minute sessions once a week. Prior to the commencement of tutoring, Annie was given assessments to determine her reading ability by a trained learning center staff member. Based on the results of her assessments, she was classified as a struggling reader and qualified for tutoring. Annie was given a variety of assessments including the PASS phonemic awareness assessment, sight words, running records, and the Woodcock Johnson Reading Mastery III (WRMT) (Woodcock; 2011).

Results from the PASS (Crumrine, & Lonegan, 2000) phonemic awareness test indicated that she had difficulty rhyming (1/6 correct), syllable segmentation (3/5 correct), phoneme deletion (4/6 correct), phoneme isolation (6/9 correct), and phoneme segmentation (3/6 correct). A relative strength of Annie’s was in sight word reading. She was able to read words through the third grade Dolch sight word lists in June of 2012. Results of the running record indicated that
she read with about 92% accuracy, but struggled with phrasing. The examiner noted that Annie struggled with phrasing and rate (reading exceptionally slow and long pauses to determine words). She also remarked that Annie would skip words she did not know and read word by word. Results of the WMRT indicated additional reading struggles. She scored one standard deviation below the mean in the word identification, word attack, word comprehension, and oral reading fluency (ORF) subsections of the test. Her cluster scores indicated that basic skills, word identification, and oral reading fluency fell into the “extremely difficult” range. Additionally, the ORF subsection indicated that Annie rarely read with expression or enthusiasm, hardly read in a way that sounded natural, and consistently read quietly. The examiner also noted that phrasing was a weakness stating that she read word by word and rarely paid attention to punctuation. Lastly, the examiner made mention that she had frequent breaks and hardly self corrected when encountering difficulty.

An informal conversation with her community learning center tutor also revealed that Annie’s largest struggle was fluency. Annie’s tutor remarked that Annie’s comprehension was decent and her sight word identification was strong. The tutor told the instructor that she noticed deficits in fluency and word identification of new and unfamiliar words.

Lastly, upon review of Annie’s records from the community learning center, Annie’s father reported that she was early in reaching developmental milestones such as walking, crawling, and talking. Additionally, he expressed concern over Annie’s overall reading ability and progress describing it as “not very good.” Finally, he voiced concern in Annie’s spelling, math, writing, and reading abilities.
Procedure

The purpose of this study was to evaluate the effectiveness of a fluency intervention. Ten intervention sessions occurred over the course of five weeks in the summer of 2012. Intervention sessions occurred at the community learning center in a distraction free area. During the course of this study, Annie received her two additional 90 minute tutoring sessions with her regular reading tutor from the learning center.

Each session followed the same format. The session began with a phonemic awareness activity to target her delayed skills for 10-15 minutes (see table 1 for a complete list of phonemic awareness activities). Following phonemic awareness instruction, various phonics/word identification activities were presented for approximately 30 minutes (see table 1 for a complete list of phonics/word identification activities). Next, Annie read a book. Six sessions required her to read a leveled reader from Reading A-Z (Cambium Learning, 2012) on her instructional reading level (an example of a Reading A-Z leveled reader can be found in the appendix). The remaining three of sessions allowed her to read popular children’s storybooks on her instructional reading level. During both conditions, the instructor stopped her after she read 2-5 pages and Annie evaluated her fluency on a child friendly fluency rubric (the rubric can be found in the appendix). The instructor provided her corrective feedback and explained where her reading was according to the rubric. Then, Annie re-read the pages discussed. If Annie had a particularly difficult time with a given text, the instructor provided a model by reading a portion of the text aloud. Then, Annie re-read the passage. She rated herself on the fluency rubric again and the instructor told her where she thought she scored. Each session concluded with the instructor modeling fluent reading out of a child friendly chapter book for approximately 15 minutes.
Table 1

<table>
<thead>
<tr>
<th>Phonemic Awareness</th>
<th>Phonics/Word Identification</th>
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<tbody>
<tr>
<td>Rhyme: generating a rhyming word based off a given word, matching words that rhyme, and completing phrases that include rhyme. <em>Sessions: 1, 4, 5, 7, 8, 9, 10</em></td>
<td>Final Blends: writing the sound in the air while saying the sound, sorting words based on final blend, board game where student has to read words with final blends to advance. <em>Sessions 2, 3, 5, 8</em></td>
</tr>
<tr>
<td>Syllable Segmentation: Clapping out syllables in a given word <em>Sessions: 2, 3, 4, 5</em></td>
<td>Syllable Segmentation: Sorting words based on number of syllables, building words with each syllable unit <em>Sessions: 2, 3, 4, 5</em></td>
</tr>
<tr>
<td>Deletion: Picture match- the student has to delete the first, middle, or last phoneme and substitute it for a new sound, picture pie-the student deletes the last sound to make a new word (ex. hammer becomes ham) <em>Sessions: 2, 3, 4, 8</em></td>
<td>Vowel Diphthongs: word sort activities with “ai” or “ou” diphthongs, games where student reads words containing diphthongs. <em>Sessions: 3, 6, 7, 8, 9</em></td>
</tr>
<tr>
<td>Phoneme Isolation: Student was told a word and asked to substitute a sound, student was given a word and asked what the beginning, middle, or ending sound was. <em>Sessions: 6, 9, 10</em></td>
<td>Word Identification: board game where student has to read words on her instructional level to advance, student was given a list of words to read to the best of her ability, sentence maker where student is given a sentence with missing words and has to complete the sentence with specific cards. <em>Sessions: 2, 5, 7, 8, 9</em></td>
</tr>
<tr>
<td>Phoneme Segmentation: Student was given a work mat and picture cards. The student had to sort the pictures based on the number of phonemes of the item the picture card showed. <em>Sessions: 9, 10</em></td>
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In addition, every other session included a timed oral reading fluency assessment (example assessment can be found in the appendix) on her instructional level, which occurred during the fluency section of the session. Annie was given a short passage and instructed to read
it silently to herself. She was provided a pencil to mark words she did not know. When she finished reading the passage she could ask what the words were. Then, Annie was instructed to read the passage aloud with as much fluency as she could. The instructor kept time. After completing the reading, Annie was asked to evaluate her reading using the fluency rubric. The instructor shared her total reading time as well as the number of words she read in a minute and any corrective feedback. Next, the instructor would model reading a short section of about 20-30 words of the passage with fluency. Then the instructor and Annie would read the section together. Finally, Annie would read the section by herself. This was repeated until the entire passage had been read in this manner. Then, Annie would re-read the entire section by herself. The instructor kept time and gave Annie praise for any improvements.

The first and last session required a slight deviation from the format. In order to achieve rapport with the student during the first session, the instructor read a student friendly story about dogs at the beginning of the session. A student survey conducted by the community learning center revealed that Annie loved dogs so the story the instructor read was about dogs and rhymed. The instructor asked Annie help complete the last word in phrases that included a rhyming component. Then the instructor introduced a phonemic awareness activity followed by a phonics activity. After the phonics activity, the instructor administered an informal reading inventory, the San Diego Quick (1969) to establish a baseline for leveled reading. The San Diego Quick is comprised of lists of words from the pre-primer level through twelfth grade. When a student misses three or more words on a given list, he or she is assumed to be at the previous level. Annie was able to read words through the second grade list. Based on this information, the information provided by her tutor, and the WRMT, the instructor administered a Reading A-Z benchmark test to assess fluency at the mid first grade level. This text was presumed to be at
Annie’s independent reading level so it could accurately reflect her fluency ability independent of word identification ability. Prior to the fluency assessment, the instructor introduced Annie to the fluency rubric that both Annie and the instructor rated her on during each session. Each section of the rubric was described and examples at each level were given. Before Annie read the passage for fluency, she was asked to rate the instructor using the rubric on examples of passage reading read by the instructor. Once the instructor felt the student had a concrete understanding of the rubric, the fluency assessment was administered.

The last session deviated from the prescribed format slightly as well. The instructor re-administered the same fluency passage on her independent reading level as session one. Additionally, the instructor administered the same passage from the second session to test fluency on her instructional reading level. Annie also received the final timed oral reading fluency passage. Lastly, Annie received the post-test of a word identification test (the pre-test was administered during the second session during the phonics part of instruction). The purpose of the word identification assessment was to provide the instructor valuable information about what phonics instruction should target. Annie was instructed to read the words to the best of her ability. The test was untimed. Because of these post-tests, there was not enough time to do a formal phonics activity. However, both the phonemic awareness and the read aloud portion of the session was included as usual.

Conclusion

The purpose of this study was to increase oral reading fluency for a second grader identified as a struggling reader. The student, Annie, attended public school in a large urban district where the majority of students come from economically disadvantaged backgrounds.
Annie regularly attended school since pre-kindergarten and community learning center since February of 2012. However, her reading skills still lagged behind those of her peers. During the course of the current study, various methods were employed in effort to bolster oral reading fluency. The instructor met with Annie 10 times over the course of 5 weeks for a fluency intervention. The student received phonemic awareness and phonics/word identification instruction during each session. In addition, a repeated reading component was included in every sessions as well as corrective feedback and self evaluation. Lastly, each session concluded with the instructor providing a model of fluent reading.
Chapter Four: Results

Introduction

The purpose of this study was to increase the oral reading fluency of Annie, a second grade student. Careful data was collected over the course of the five week, ten session intervention that stressed corrective feedback, self-evaluation, repeated readings, phonemic awareness, and phonics as a means to increase oral reading fluency. All instruction was designed to meet the needs of the student. Annie had identified needs in reading fluency and word identification. In Chapter 3, results of pre and post test data are discussed and represented through graphs. Additionally, five fluency passages are discussed and represented as well as the fluency progress made on the repeated reading portion of the intervention.

Results of Pre and Post Test Data

On the first day of the intervention, a pre-test fluency assessment on the student’s independent reading level was administered by the instructor. A fluency rubric assessed the student’s oral reading fluency and is included below (the rubric can also be found in the appendix). The rubric measured phrasing, rate, punctuation, and expression on a four point scale with four being the highest score possible and one being the lowest score possible. The highest total score one could earn was 16 and 4 was the lowest total score one could earn. The rubric was made child friendly so Annie could refer to each section by the type of face presented. The student rubric was in color so she could also refer to the color of the face. For example, the red, sad face was the same as a score of 1. The unsure, yellow face was a score of 2, the somewhat happy, green face was a score of 3, and the excited, pink face was a score of 4.
### INCREASING ORAL READING FLUENCY

<table>
<thead>
<tr>
<th>Part:</th>
<th>Little or No Fluency</th>
<th>Some Fluency</th>
<th>Okay Fluency</th>
<th>Awesome Fluency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phrasing</strong></td>
<td>I read word-by-word. Sometimes I group words together when I read.</td>
<td>I often group words together when I read, but sometimes it is still word-by-word.</td>
<td>I group words together all the time when I read, but sometimes they are small groups of words.</td>
<td>I am really great at grouping many words together as I read. I don’t mess up very often.</td>
</tr>
<tr>
<td><strong>Rate</strong></td>
<td>I am really slow and I struggle through many of the words. Because I read this way, I don’t really understand what I am reading.</td>
<td>I can be slow because I have to read word-by-word when I don’t know the words. I take breaks, pause too long, and repeat too often when I read.</td>
<td>I try to read like I talk, but sometimes it is too fast or too slow. I go slow when I don’t know the words. I might take breaks, pause, and repeat.</td>
<td>I almost always read like I talk. I speed up or slow down my reading when I want to. I only break, pause, or repeat if it makes sense in the story.</td>
</tr>
<tr>
<td><strong>Punctuation</strong></td>
<td>I don’t really pay attention to where the periods, exclamation points, commas, and questions marks are.</td>
<td>I sometimes pay attention to the punctuation. I might use it the wrong way.</td>
<td>I usually pay attention to the punctuation. I make a mistake once in a while.</td>
<td>I almost always pay attention to the punctuation and I use it to help me know how to read the story.</td>
</tr>
<tr>
<td><strong>Expression</strong></td>
<td>I don’t use expression when I read.</td>
<td>I sometimes try to use expression when I read, but I might use it the wrong way.</td>
<td>I try to use expression when I read.</td>
<td>I use expression when I read and it helps me to understand the story better.</td>
</tr>
</tbody>
</table>

**Fluency Rating Scale: How is your Reading??**
The pre-test test was administered on June 27, 2012. Annie scored the following on the pre-test assessment: phrasing-2, rate-2, punctuation-1, and expression-1. The total pre-test score was 6. This means that she tried to group words together, but often read word by word. She also had long pauses, repeated words, and skipped words she did not know. Annie did not pay attention to punctuation. She never paused at periods, or showed enthusiasm with exclamation points. Furthermore, Annie did not use any expression when she read. The same exact fluency test on Annie’s independent reading level was administered by the instructor on July 25, 2012, the last day of the intervention. Annie had the following scores on the post-test: phrasing-3, rate-3, punctuation-4, and phrasing-4, which earned her a total score of 14. These scores mean that Annie grouped words together when she read, although at times, they were just a few words long. She read with the appropriate speed. In addition, she paused at periods, asked questions, and made note of exclamation marks when reading. She also read with expression that helped her and the listener gain understanding of the stories. During the post-test, Annie made one reading error compared to six on the pre-test. The instructor noticed that Annie read with purpose on the post test assessment compared to mumbling that was present during the pre-test. Results are summarized in Graph 1.
In addition to the pre and post test data on Annie’s independent reading level, a fluency pre and post assessment was given on her instructional level to assess oral reading fluency. The same test was used for both the pre and post test. The pre-test assessment was administered during the second intervention session and the post-test assessment was administered during the last intervention session. The same fluency rubric described above was used to assess oral reading fluency. Annie scored a 1 on all sections of the pre-test which gave a total score of 4. On the post test, Annie scored a 3 on all sections except expression which earned a score of 4. Her total score on the post test was a 13. Results are summarized in Graph 2.
In addition to the pre and post test story assessments, Annie was given a word family assessment to assess word identification skills (full test can be found in the appendix). The purpose of including these results is to evaluate the effectiveness of the phonics activities. It stands to reason that fluency would increase if ability to correctly read words increased. During each session, a phonics instruction portion was included. The pre-test occurred during session 2 and the post test occurred during session 10. On the pre-test Annie missed a total of 29 words out of 120. This means she read 75.8% of words correctly. She had particular difficulty with the “unk,” “ail,” “out,” and “ank” word families. She did not correctly identify any of those words. On the post-test, Annie missed a total of eight words out of 120. She read 93.3% of words correctly on the post test. Errors on the post-test tended to be initial substitutions and additions of a sound; for example, she said the word “gain” was “grain”. In the post test she missed one “unk” word by inserting an “r” in the word “dunk” and missed one word in the “ank” family by
inserting an “r” in the word “tank.” She correctly read all of the “ail” and “out” words. Pre and post test scores are displayed in Graph 3.

Graph 3

Results of Fluency Tests and Repeated Reading Measures

Oral reading fluency was also assessed once a week on a short leveled passage. Annie read the passage once silently, asked for guidance about any new or unknown words, and then read the passage aloud. The first time she read the passage was referred to as Round 1. Round 1 was timed. After the first reading, the student evaluated herself on the reading rubric, the instructor provided feedback, told the student where she scored, and then they read the passage in 3 smaller chunks following the I read, we read, you read instructional method. Then, the student re-read the passage aloud independently again which was referred to as Round 2. Round 2 was also timed. There were a total of 5 of these passages administered throughout the 5 week intervention.
Overall, Annie made steady improvement over the 5 week intervention. On three of the Round two readings, Annie had an overall score total fluency score of 14 (shown in Graph 7). On one of the Round 2 readings she had an overall reading score of 13. On the very last assessment Annie had a Round One total score of 14, a notable improvement from a total score of 6 on Round 1 of the first day. Additionally, Annie read 28 words in a minute during Round 1 on the first assessment whereas on the last assessment she read a total of 61 words in a minute during Round 1. On most sessions, Annie showed improvement in words read per minute and total fluency score from Round 1 to Round 2. During the 8th session Annie read 58 words in a minute during Round 1 and 74 words in a minute in Round 2. During that same session her total fluency score went from a total score of 9 to a total score of 14.

There were two exceptions when Annie did not demonstrate growth on number of words read. This occurred during session 6 and session 10. Although Annie did not read as many words, her fluency scores did not obviously decrease. In session 6 the total fluency score went down one point and in session 10 the total score stayed the same. On the days that Annie did not make gains, she was noticeably more tired. During session 6, she was yawning and needed reminders to focus. This was uncharacteristic of her. During session 10, Annie knew it was the last day of the intervention. She was eager to show what she had learned which translated into nervousness. She told the instructor she was nervous before she did the second reading.

Throughout all sessions, Annie demonstrated impressive accuracy. However, it should be noted that self corrections did not count against her nor did repeating a word. Annie made several self corrections on all fluency assessments and at times would repeat words. The instructor observed an overall decrease in mumbling and repeating of words throughout the sessions and a decrease in the need to self correct. A summary of results are provided in Table 2.
and Table 3. Table 2 gives an overview of each test, where as Table 3 breaks down the score received on each area of the fluency rubric. Also provided are several graphs representing Annie’s scores. Graphs 4-7 depict the information in Table 2. Graphs 8-12 depict the information from Table 3.

Table 2- General Information

<table>
<thead>
<tr>
<th>Session</th>
<th>Round 1</th>
<th>Round 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Words per minute</td>
<td>Total Time</td>
</tr>
<tr>
<td>2 93 words</td>
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<td>4 84 words</td>
<td>47</td>
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<td>6 84 words</td>
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<td>8 84 words</td>
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<td>1:35</td>
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<tr>
<td>10 110 words</td>
<td>61</td>
<td>1:45</td>
</tr>
</tbody>
</table>
Graph 4 - Number of Words Read in One Minute

Graph 5 - Total Reading Time to Complete the Entire Passage
Graph 6 - Accuracy

Graph 7 - Total Fluency Score

(All scores on the fluency rubric added together)
Table 3- Scores Earned for Each Section of the Fluency Rubric

<table>
<thead>
<tr>
<th>Session</th>
<th>Round</th>
<th>Phrasing</th>
<th>Rate</th>
<th>Punctuation</th>
<th>Expression</th>
<th>Total Score</th>
</tr>
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<td>3</td>
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<td>4</td>
<td>4</td>
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</tbody>
</table>

Graph 8

**Phrasing**

- **Round 1**
- **Round 2**
Graph 9

**Rate**

- **Score**
- **Session**
- **Round 1**
- **Round 2**

Graph 10

**Punctuation**

- **Score**
- **Session**
- **Round 1**
- **Round 2**
In addition to the once a week fluency passages, Annie participated in a repeated reading of a book on her instructional level for sessions 2-9. She did not complete a repeated reading on the first and last sessions as she was taking pre and post assessments. During these repeated
readings, Annie read the passage, evaluated herself on the fluency rubric, accepted feedback from her instructor, and then re-read the passage.

Throughout the intervention, Annie showed steady growth in fluency. She especially seemed to improve in the areas of punctuation and expression. Annie tended to score better on stories that she was familiar with before the reading. For example, during session 3 she read a Dr. Suess Book, *One Fish, Two Fish, Red Fish, Blue Fish* (1960), and scored her second highest score of the entire intervention. Similarly, Annie scored her personal best on both Round 1 and Round 2 during session 9 when she read a leveled reader from Reading A-Z (Cambium, 2012) *Goldilocks and the Three Bears*. Annie had the most difficulty with fluency in the area of rate. Most of her errors tended to be repeating a word or pausing for too long. While rate did improve throughout the intervention, the instructor made several notes indicating that her errors in rate were due to repetitions of words. Furthermore, phrasing proved to be difficult for Annie but tended to show good improvements from Round 1 to Round 2. Results of the repeated reading are summarized in Table 4. Graphs 13-17 provide a graphic representation of her scores on each section from the rubric.
Table 4

<table>
<thead>
<tr>
<th>Session</th>
<th>Round</th>
<th>Phrasing</th>
<th>Rate</th>
<th>Punctuation</th>
<th>Expression</th>
<th>Total Score</th>
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<td>15</td>
</tr>
</tbody>
</table>

Graph 13

![Bar chart showing phrasing scores for sessions 2 to 9, with Round 1 and Round 2 scores indicated by different colors.](chart.png)
INCREASING ORAL READING FLUENCY

Graph 16

Expression

Round 1  Round 2

Graph 17

Total Score

Round 1  Round 2
Conclusion

The results of this study suggest improvement in Annie’s oral reading fluency. She made notable improvements from pre to post tests. This was true for all pre-test measures. Annie also demonstrated steady growth on the reading fluency tests and on the repeated readings. These findings are consistent with previous research. Ring et. al (2012) found that repeated readings increased student’s overall reading fluency. Furthermore, Therrien et al. (2011) found that corrective feedback was an essential component to increase reading fluency. Annie responded very well to feedback and worked hard to improve each day of the intervention and the results of this study illustrate that this intervention proved to be effective for Annie. The next chapter will connect the results of this study to previous research. It will also offer an interpretation of the results.
Chapter Five: Conclusions

Introduction

The purpose of this study was to increase Annie’s oral reading fluency through an intervention using several instructional strategies including repeated reading, corrective feedback, self assessment, direct phonics instruction, and explicit phonemic awareness instruction. Results of this study indicated that Annie made impressive gains in oral reading fluency. In this chapter, connections between the current case study and past research are discussed, as well as a connection to Common Core State Standards. The chapter concludes with a discussion of strengths and limitations of the current study and recommendations for Annie’s parents and future educators to further support her reading development.

Connections to Research

This case study fits into the larger body of research revolving around fluency interventions and teaching beginning reading skills. Chapter 2 reviewed current research related to literacy, in particular, fluency, phonemic awareness, and phonics. This study combined various aspects of successful instructional methods from previous studies to determine whether oral reading fluency would be increased in a second grade struggling reader.

Each day of the intervention followed a prescribed format as detailed in Chapter 3. Each intervention started with phonemic awareness instruction, followed by phonics instruction, then repeated readings where corrective feedback and self evaluation occurred, and ended with a read aloud where the instructor modeled fluent reading. The researcher in the current study replicated various aspects of previous success from the body of reading research.
A phonemic awareness component was included because Annie lacked some basic reading skills such as rhyming. Wood (2000) found that the ability to rhyme words and delete sounds in words strongly influenced overall reading ability in children. Based on the initial assessments given at the community learning center, Annie had an especially hard time with rhyming and segmenting phonemes (see Chapter 3 for details). Wood found that students who are proficient in rhyming are able to draw complex orthographic connections in words, which is related to overall reading success. Therefore, a phonemic awareness element was included to target missing skills. Rhyming, syllable segmentation, deletion, phoneme segmentation, and phoneme isolation were taught regularly throughout the intervention (See Table 1 in Chapter 3 for a complete breakdown of activities and sessions that targeted each skill).

In addition, a phonics component was included to explicitly teach decoding and word recognition. Students who are able to automatically recognize words have an increased chance of reading with fluency. Joseph (2002), Juel and Midden-Cupp (2000), and Foorman et al. (1998) all studied the effect of explicit instruction in struggling readers. Each of their studies yielded considerable support for explicitly teaching phonics to struggling readers. In light of this, during each intervention session the instructor explicitly taught phonics. Joseph found that word sorts and word boxes were effective teaching strategies for phonics instruction. One reason these activities have found so much success is that they are highly engaging to students. For that reason, all phonics instruction was highly engaging. Technology was integrated, board games supported phonics objectives, and the student was able to sort words in ways that made sense to her. Furthermore, Juel and Midden-Cupp saw success in one classroom where students were able to manipulate words. Many of the phonics activities allowed for the student to just that. The
student appeared to really enjoy the phonics portion of the day. She would even request certain activities for the next session from time to time.

Oral reading fluency was the main focus of the study. Ritchy (2008) found that fluency was stronger when students had strong decoding skills thus lending further support to the phonics component of the intervention. Furthermore, there has been a considerable body of research supporting the use of repeated readings to increase oral reading fluency. Ring, Barefoot, Avrit, Brown, and Black (2012) found some success in a repeated reading program designed to increase recognition of letter clusters. Additionally, Therrien et al. (2011) found that repeated reading was effective at increasing the rate of reading in students who participated in their study. When deciding to implement a repeated reading program, Therrien and Kubina (2006) stated that a repeated reading model is most effective for students between first and third grade. Since Annie had just completed second grade, this seemed like a fitting choice. Therrien and Kubina also note that corrective feedback is essential for a repeated reading intervention to be effective. This echoes the findings by Therrien et al. who found in their study evaluating a repeated reading RAAC intervention versus a non-repetitive RAAC condition that both methods produced statistically significant gains but the mediating factor was providing corrective feedback to the student. In light of the effectiveness of corrective feedback, this was an essential component in the current case study. Furthermore, Therrien et al., used a student self-evaluation of their own reading on a child friendly fluency rubric during the RAAC intervention. A student self-evaluation was also an element of the current study as it stands to reason if students are cognizant of their reading errors they will work to minimize them.

Each session concluded with the instructor reading aloud to the student. This was included because a vast body of research supports teacher modeling as an important instructional
strategy (Ritchy, 2008; Juel & Midden-Cupp 2000; Foorman et al, 1998). Moreover, Applegate and Applegate (2010) found that students who liked reading and had positive feelings about reading, were more likely to want to read and placed higher value on reading. Because of this, the researcher reasoned that the Annie would enjoy sessions more if she could be an active listener to fluent reading and provided opportunities to think deeply about an age appropriate text. The instructor noted that Annie looked forward to the read aloud time and often asked to skip ahead to that piece of the session.

This intervention was designed to target Annie’s needs and was based off of prior success with the instructional strategies selected. Each piece of the fluency intervention was selected from evidenced based practices and intended to engage and motivate the student. This case study, adds to the current body to research because it specifically targeted fluency by focusing on delayed literacy skills. While there is ample evidence suggesting repeated readings as an effective instructional method to increase oral reading fluency, there is not such a vast set of research linking self evaluation to fluency. Furthermore, phonics and phonemic awareness were chief in building Annie’s foundational skills in order to master fluency. While there is some research linking decoding skills to fluent reading, more research is needed in this area. The current case study carries implications for more research studies in this area.

Explanation of Results

This intervention aimed to increase the oral reading fluency of one student through use of repeated readings, corrective feedback, phonics, and phonemic awareness. The intervention occurred for five weeks during the summer after Annie completed second grade. Careful analysis
of the results are produced and discussed in Chapter Four. Throughout this section, the researchers will offer some explanations to the results provided by the data collected.

The first set of data collected centered on pre and post tests. Annie completed three different pre and post test assessments. The first pre and post test pair was a fluency assessment on her independent reading level. The second was a fluency assessment on her instructional level. Both of these fluency assessments were graded on the child friendly fluency rubric provided in Chapter Four and in the Appendix. The last pre and post test pair that Annie took was a word family test.

Results of the independent reading level test suggested that Annie made substantial gains. On the pre-test, Annie scored a total score on the fluency rubric of 6, whereas on the post-test her total score was 14. This was an overall increase of 8 points on the fluency rubric during the five week intervention, thus showing substantial gains in fluency. Interestingly, on the pre-test Annie scored lowest in the areas of punctuation and expression. This means that she read in a monotone voice and did not adhere to the conventions of print. On the post-test, Annie scored the highest score possible on the rubric in these sections. This supports that the corrective feedback component was paramount in the intervention for Annie’s fluency gains. Furthermore, she made gains in the areas of phrasing and rate according to the fluency rubric. However, her increase was only one point in both of these sections. This suggests that a useful component to the intervention would have been a focus on phrasing. It stands to reason if Annie was proficient in phrasing words, she would read with more confidence and at an appropriate rate. This should not undermine the impressive gains Annie did make for pre to post test on her independent reading level.
Similarly, results from the pre and post test that assessed fluency on her instructional level, yielded similar results to those discussed above. On the Pre-test Annie scored a total score of 4. This means that she earned the lowest possible score on each section of the fluency rubric (phrasing, rate, punctuation, and expression). On the post-test, Annie’s total score jumped to a 13; a total increase of 9 points from pre to post test. Similar to what was seen on the independent level tests, her largest gain was in expression where she earned the highest score possible. Furthermore, Annie increased 2 points from pre to post test (on a 4 point scale) all the other areas. This indicates that on a level where Annie is still in need of instruction, her scores increased at about the same rate. This indicates that the instructional methods employed were effective for her. The instructor noted an increased effort to apply fluency skills during the course of the intervention.

The final pre and post test that Annie took was a word family test. This test was selected to provide valuable information about which phonics skills Annie had the most difficulty with. The test evaluated 20 different word families. Each word family contained 6 words for a total of 120 words. On the pre-test Annie read 91/120 correctly for a score of 75.8%. She had particular difficulty with 4 word families where she did not answer a single word correctly. On the post test, Annie read 112/120 words correctly for a score of 93.3%. On the post test, she made marked increases in the 4 word families that she initially struggled in. Of those 24 words, she only missed 2. Both errors were by inserting an initial blend (the word “dunk” became “drunk”). Other errors on the post test were also because she inserted a sound that was not there or substituted an initial sound. Results of the word family test suggest that Annie made excellent gains in phonics skills thus supporting the effectiveness of the phonics component of intervention. These results also indicate that Annie needs more support in identifying the
beginning sound of the word. This was an area addressed in the phonemic awareness piece of the intervention. While the instructor noted that Annie did a good job of identifying the first sound in a word, she struggled to be able to separate the first and second sounds of words containing initial blends. This implies that Annie would continue to benefit from phonemic awareness and phonics instruction.

Another area where data was collected was during the once a week short fluency assessments. During this time, Annie silently read the passage, then had the opportunity to ask about any words she did not know. Next, she read the passage out loud and the instructor timed it (Round 1). After that, Annie evaluated herself on the fluency rubric and the instructor provided feedback. Then, the instructor and student read the passage following the “I read, we read, you read model” as described in Chapter 3. Lastly, the student reread the passage independently while the instructor kept time (Round 2). Results of these assessments revealed some interesting patterns. There was a steady increase in the number of words she read during Round 1. Each session showed an increase in words. On the first assessment, Annie read only 28 words in one minute during Round 1. On the last assessment, Annie read a total of 61 words in a minute during Round 1. This indicates that she increased rate during each session. Interestingly, the number of words read during Round 2 fluctuated. On three of the five assessments, Annie read more words in Round 2 than Round 1 which is to be expected. She increased by 16, 20, 39 words on the sessions she made improvements which is a remarkable improvement. There were two assessments where she did not make these gains. The first time occurred during the sixth session. On this session, Annie arrived late. This was the only time during the course of the intervention that this occurred. She was also extremely sleepy during this session. She did not act quite like her normal self which could explain the relatively flat scores from Round 1 to Round 2. The
second time this occurred was on the last session. On this day, the number of words she read in one minute went markedly down. On Round 1, she read 61 words and on Round 2 she read only 53 words. Annie knew this was the last assessment of the day and of the intervention. She was extremely apprehensive to take this test. She shared with the instructor that she was nervous to do the second reading because she wanted to do her best. The researcher believes that her nerves contributed to her sinking score on that last day. Overall, Annie made noticeable gains in the number of words she read in one minute during the course of the intervention. This is most clearly demonstrated in her round one scores. This indicates that Annie was receptive to the intervention and applied fluency concepts during initial readings and worked hard to improve upon them.

While evaluating the fluency passage data, it is also important to look at each section of the rubric and how scores varied between days and between rounds. In terms of total fluency score, Annie made steady increases throughout the course of the intervention. There was only one session where her total score went down (Session 6, discussed above) and one session where her total score plateaued (Session 10, discussed above). Round 1 total scores steadily increased throughout the 5 assessments, with only one exception during Session 8. Round 2 scores were pretty consistent hovering around a total score of 13-14. The one exception was Session 6 where her score decreased from pre to post test. This indicates that the repeated reading produced gains from pre to post test. These scores also indicate that Annie had some trouble in specific areas of the rubric. The highest possible score one could earn on the rubric was a 16. However, Annie’s highest scores were 14. When looking at each section of the fluency rubric, Annie continually struggled with phrasing and rate. The only time Annie scored a 4 on phrasing was on the first assessment (Session 2) during Round 2. The highest Annie ever scored on rate was a 3.5 and that
occurred on Session 4, which was the second assessment. Otherwise, her round 2 scores for phrasing and rate hovered around a 3. However, it should be noted that she never fell in these areas between Round 1 and Round 2. Her scores either improved or stayed the same, and the only days they did not show an increase were during sessions 6 and 10. A similar trend is found in the area of punctuation. Her scores either increased or stayed the same. The days that they did not increase were during sessions 6 and 10. Unlike the rate and phrasing scores, Annie did reach the highest possible score in punctuation. This occurred during Session 8 and Session 10. This indicates that at time went on, and she had more practice, her punctuation increased. This also lends support that the corrective feedback and modeling done by the instructor contributed to her increased skills which is consistent with the findings by Therrien and Kubina (2006). Lastly, Annie made the most improvement in the last section of the rubric, expression. While there was some fluctuation in the scores, Annie earned the most scores of 4 in expression. Session 6 was the only day where her expression score decreased (probably because of fatigue as mentioned earlier). Interestingly, each day of the intervention her Round 1 score increased in expression except for Session 8. On the last session, Annie earned the top score on both Round 1 and Round 2. This suggests that Annie’s greatest area of gain was in reading with expression. The instructor noticed that Annie really tried to read with expression as the sessions progressed and tried to emulate the instructor’s expression when she was reading aloud.

The last area to discuss is the repeated readings that took place during Sessions 2-9. Each day, Annie read a book on her instructional level. The instructor would stop her after she read 2-5 pages. The student would evaluate herself on the rubric and the instructor would provide feedback. Then, the student would re-read the passage. This was notably the child’s least favorite activity. However, these repeated readings support previous research that repeated readings is a
successful method to increase oral reading fluency (Ritchy, 2008; Therrien et al., 2011; Ring et al., 2012). Each day Annie made noticeable improvements between the first and second readings in all areas of the rubric. Every single session showed that she increased phrasing, rate, punctuation, and fluency from Round 1 to Round 2. This is reflected in the fact that her total score in Round 2 was consistently higher than her total score in Round 1. Results further indicated that her skills improved in Round 1 as each session progressed. Her improvement in the area of expression most clearly illustrates that. While there was some fluctuation in Round 1 scores in the other areas, the overall trend was upward. Rate and Phrasing were the two areas that had the most fluctuation, and as mentioned earlier, were the areas that she had the most trouble with.

Overall, the repeated readings were a successful at increasing Annie’s oral reading fluency. This is evidenced by pre and post test scores as well as the data collected during the fluency passages and repeated readings. While Annie’s literacy skills are still behind those of typical second graders, this intervention made great strides in closing the gaps in her fluency and word family identification. The rest of this chapter will focus on what would be beneficial for Annie moving forward.

Discussion of Common State Core Standards

Wisconsin recently adopted the Common Core State Standards (CCSS). CCSS addresses the skills students should have before moving onto the next grade level. Annie’s intervention was designed to support the skills stated in the CCSS. The specific areas addressed in the current intervention are referred to by CCSS as “Reading: Foundational Skills” (Common Core State
INCREASING ORAL READING FLUENCY

The two areas discussed in the foundational skills section are fluency and decoding.

According to the CCSS students in second grade should be able to read aloud purposefully. Furthermore CCSS 2.RFS.4 states that students should “read grade-level text orally with accuracy, appropriate rate, and expression.” Throughout the current study, Annie’s made steady gains in oral reading fluency. Although she made steady gains in fluency, this was not with a grade-level text. The texts she read were at her instructional level which is at the ending first grade level. In order for her to meet the requirements of the CCSS, Annie needs continued reading instruction to elevate her skills to an ending second or beginning third grade level.

Some of this could be accomplished by revisiting CCSS 2.RFS.3 which discusses what decoding abilities students in second grade should have. Phonics was incorporated into every intervention session. Skills that were addressed during sessions were the following: “distinguish long and short vowels when reading regularly spelled one syllable words” and “identify words with inconsistent but common spelling-sound correspondences” as stated by 2.RFS.3 CCSS (Common Core Initiative, 2012). According to the word family phonics test, Annie made gains in this area. However, this is still an area of need to elevate her skills to those of her peers.

Specific recommendations for future educators and Annie’s family will be made later in this chapter. The next section will discuss the strengths and limitations of the current study.

Strengths and Limitations

As evidenced by the gains Annie made over the course of this study, the intervention was effective. Annie’s fluency increased an impressive amount over the course of the five week intervention. Clearly, the intervention designed to target Annie’s delays did just that. Ring et al.
(2012) research indicates that the most effective interventions consider the needs of the entire student. Careful review of Annie’s educational needs was examined before the intervention was implemented. Moreover, the intervention occurred with a 1:1 student to teacher ratio so there were no outside distractions. Annie was engaged and appeared to enjoy each session. Applegate and Applegate (2010) found that when students enjoyed reading, they were more motivated to read. Their research also stated that students who thought of themselves as successful readers, placed more value on reading. Annie was very motivated throughout the current study.

Moreover, previous research on repeated readings to increase oral reading fluency has earned high praise. Research by Ritchy (2008), Therrien et al. (2011), and Ring et al. (2012) confirmed repeated reading as an effective instructional strategy. This was also an effective strategy for Annie. Furthermore, Therrien et al. found that corrective feedback was the most effective instructional strategy echoing earlier findings from Therrien and Kubina (2006). Therrien et al. found that an equally effective, if not more effective intervention than repeated reading, was providing the student with a variety of texts and giving corrective feedback. Annie never read the same text twice but was constantly given corrective feedback. As evidenced by the increase in specific areas of the fluency rubric and total scores, Annie made great improvements. Another strength of the current study lies in the emphasis on beginning reading skills. According to WRMT (Johnson; 2011) scores, Annie fell in the “very difficult” basic reading range. Wood (2000) found that phonemic awareness ability predicts students who are considered “at-risk” for becoming a struggling reader. Moreover, Foster and Miller (2008) found that in early elementary, the literacy gap exists in phonics ability. Phonics instruction was strong throughout the study. Juel and Midden-Cupp (2000) proposed that direct instruction of phonics coupled with modeling produced the best results in reading for first grade children. Foorman et al. (1998)
postulated that direct instruction of the alphabetic code was an essential component to success in phonics. The current study included a direct instruction of phonics component and provided opportunity for the teacher to model skills, specifically during the “I read, we read, you read” fluency assessments and at the end of each session when the instructor read aloud to Annie. Another strength of the current study was that it occurred while Annie was still relatively young. Many studies have found that early intervention is of chief importance for struggling readers (Ring et al., 2012). This intervention was much longer than many interventions as it was 90 minutes in length each session. This allowed for the instructor to target each area of need every day.

Alternatively, just as there were many strengths in the current study, there were also some limitations. The current study only included one child. Therefore, it is unknown if this same intervention would be effective for other children with similar needs to Annie’s. Furthermore, the intervention was only for five weeks, a relatively short amount of time. It is unknown if the initial success would continue if the study was extended. There is also no data on retention of the skills that she learned. It is unknown whether she will translate these skills into a different environment with a different instructor. Lastly, this intervention did not occur in isolation. Annie had two tutoring sessions with her regular tutor at the community learning center. There was a fluency component to her sessions with the community learning center tutor, therefore some of the gains witnessed, might be in part to her work with the community learning tutor. Future research should replicate this intervention with a larger sample, for a longer amount of time, and collect follow up data on oral reading fluency.

While there were strengths and limitations to the current study, the most overwhelming finding was that Annie made progress in oral reading fluency. Despite the gains, the largest
limitation of the current study is it did not elevate her overall reading skills to those of typical second graders. The next section will provide recommendations for what steps should be taken next.

**Recommendations**

Based on the current study, Annie still has identified needs in the area of literacy. She did make remarkable gains in fluency over the course of the intervention. Therefore, fluency skills should continue to be supported in a similar format as in the current study. Specific areas of fluency focus address phrasing and rate.

Additionally, her basic skills still lag behind those of her same aged peers. Therefore, moving forward, reading instruction should further target delayed basic reading skills. Phonemic awareness, especially in the area of phoneme segmentation, should be targeted. The word family assessment revealed that Annie adds sounds where they do not belong and will occasionally substitute beginning sounds of words. Furthermore, Foster and Miller (2008) found as the phonics gap closes around third grade, a comprehension gap opens. Future reading instruction should not neglect the importance of comprehension. Applegate and Applegate (2010) found that students who do not have strong comprehension skills are less motivated to read, have less positive feelings toward reading, and place less value on reading. A concerted effort should be made to target comprehension skills.

Much of this can occur within the school setting through regular classroom instruction and interventions to target Annie’s reading delays. The school should thoughtfully and carefully plan lessons to support Annie’s developing literacy skills. However, her parents can also support her growing literacy development by modeling fluent reading. Everyday, an adult should read to
Annie modeling fluency. Not only does this provide a model of fluent reading, it reinforces the importance of reading. The current study is just one example how motivating a student, providing reading activities at their level, and modeling skills is a successful method at increasing literacy skills.

Conclusion

This chapter connected the current study to previous research, analyzed the results of the current study, discussed common core standards, highlighted strengths and limitations of the current study, and provided recommendations for individuals who work with the student in the future. The goal of the current study was to increase the oral reading fluency of Annie, a struggling reader. The study was designed around CCSS and evidence based practices from a vast body of reading research. Results of this study indicate that the intervention was effective at increasing Annie’s oral reading fluency. While there were many strengths to the study, most notably Annie’s success, future research should replicate this study on a larger scale for a longer amount of time.
References:


Individuals with Disabilities Education Improvement Act of 2004. (IDEA)


Suess, Dr. (1960). *One Fish, Two Fish, Red Fish, Blue Fish*. New York: Random House.


United States Department of Education (2005). *NAEP 2005 Assessment Results*


<table>
<thead>
<tr>
<th>Part</th>
<th>Little or No Fluency</th>
<th>Some Fluency</th>
<th>Okay Fluency</th>
<th>Awesome Fluency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phrasing</td>
<td>I read word-by-word. Sometimes I group words together when I read.</td>
<td>I often group words together when I read, but sometimes it is still word-by-word.</td>
<td>I group words together all the time when I read, but sometimes they are small groups of words.</td>
<td>I am really great at grouping many words together as I read. I don’t mess up very often.</td>
</tr>
<tr>
<td>Rate</td>
<td>I am really slow and I struggle through many of the words. Because I read this way, I don’t really understand what I am reading.</td>
<td>I can be slow because I have to read word-by-word when I don’t know the words. I take breaks, pause too long, and repeat too often when I read.</td>
<td>I try to read like I talk, but sometimes it is too fast or too slow. I go slow when I don’t know the words. I might take breaks, pause, and repeat.</td>
<td>I almost always read like I talk. I speed up or slow down my reading when I want to. I only break, pause, or repeat if it makes sense in the story.</td>
</tr>
<tr>
<td>Punctuation</td>
<td>I don’t really pay attention to where the periods, exclamation points, commas, and questions marks are.</td>
<td>I sometimes pay attention to the punctuation. I might use it the wrong way.</td>
<td>I usually pay attention to the punctuation. I make a mistake once in a while.</td>
<td>I almost always pay attention to the punctuation and I use it to help me know how to read the story.</td>
</tr>
<tr>
<td>Expression</td>
<td>I don’t use expression when I read.</td>
<td>I sometimes try to use expression when I read, but I might use it the wrong way.</td>
<td>I try to use expression when I read.</td>
<td>I use expression when I read and it helps me to understand the story better.</td>
</tr>
</tbody>
</table>
San Diego Quick Assessment
of Reading Ability

Grade level K-11
Word Recognition
Individual testing
10 minutes

- **WHAT** This test measures the recognition of words out of context. Generally, proficient readers read as accurately both in and out of context. This test consists of 13 graded word lists from preprimer to eleventh grade. The words within each list are of about equal difficulty.

- **WHY** Weak readers overrelly on context and recognize words in context more easily than out of context.

- **HOW** Begin with a list two or three sets below the student’s grade level and continue until the student makes three or more errors in a list. Present the Student Material word list to the student. Use a paper to cover word lists not being read. Mark errors on the Record form by crossing out each missed word. Mispunrunciations can be written down next to the word.

  When the teacher says “next”, the student should move the paper down and read the next word. Encourage the student to read words that he or she does not know so that you can identify the techniques used for word identification. Wait no longer than five seconds before moving on to the next word.

- **WHAT IT MEANS** Each list completed by the student can be scored as shown below.

<table>
<thead>
<tr>
<th>Errors/List</th>
<th>Reading Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 error</td>
<td>Independent Level</td>
</tr>
<tr>
<td>2 errors</td>
<td>Instructional Level</td>
</tr>
<tr>
<td>3 errors</td>
<td>Frustration Level</td>
</tr>
</tbody>
</table>

**Student Reading Level** = The student’s reading level is the last grade-level word list in which the student reads eight or more words correctly.
San Diego Quick Assessment – Record Form

Name ___________________ Grade _______ Date __________

Directions: Begin with a list that is at least two or three sets below the student’s grade level. Have the student read each word aloud on that list. Continue until the student makes three or more errors in a list.

Reading Levels: One error - independent level; two errors - instructional level; three errors - frustration level. When testing is completed, record the highest level in each of these categories in the spaces below.

**INDEPENDENT ____________  INSTRUCTIONAL ______________  FRUSTRATION ____________**

<table>
<thead>
<tr>
<th>Preprimer</th>
<th>Primer</th>
<th>Grade 1</th>
<th>Grade 2</th>
<th>Grade 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>see</td>
<td>you</td>
<td>road</td>
<td>our</td>
<td>city</td>
</tr>
<tr>
<td>play</td>
<td>come</td>
<td>live</td>
<td>please</td>
<td>middle</td>
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<td>me</td>
<td>not</td>
<td>thank</td>
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<td>moment</td>
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<td>at</td>
<td>with</td>
<td>when</td>
<td>town</td>
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<tr>
<td>run</td>
<td>jump</td>
<td>bigger</td>
<td>early</td>
<td>exclaimed</td>
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<tr>
<td>go</td>
<td>help</td>
<td>how</td>
<td>send</td>
<td>several</td>
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<tr>
<td>and</td>
<td>is</td>
<td>always</td>
<td>wide</td>
<td>lonely</td>
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<tr>
<td>look</td>
<td>work</td>
<td>night</td>
<td>believe</td>
<td>drew</td>
</tr>
<tr>
<td>can</td>
<td>are</td>
<td>spring</td>
<td>quietly</td>
<td>since</td>
</tr>
<tr>
<td>here</td>
<td>this</td>
<td>today</td>
<td>carefully</td>
<td>straight</td>
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<th>Grade 5</th>
<th>Grade 6</th>
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</thead>
<tbody>
<tr>
<td>decided</td>
<td>scanty</td>
<td>bridge</td>
<td>amber</td>
</tr>
<tr>
<td>served</td>
<td>business</td>
<td>commercial</td>
<td>dominion</td>
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<td>realized</td>
<td>escaped</td>
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<td>daunted</td>
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<td>grim</td>
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<tr>
<td>capacious</td>
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<td>zany</td>
<td>galore</td>
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<tr>
<td>limitation</td>
<td>isolation</td>
<td>jerkin</td>
<td>rotunda</td>
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<tr>
<td>pretext</td>
<td>molecule</td>
<td>nausea</td>
<td>capitalism</td>
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<td>intrigue</td>
<td>ritual</td>
<td>gratuitous</td>
<td>prevaricate</td>
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<td>delusion</td>
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San Diego Quick Assessment – Student Material

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How do you get to school?
Most boys and girls take a school bus.
Some use their two feet and walk.
Many boys and girls ride in a car to school.
You may know boys and girls who ride a bike.
In the city, some boys and girls take a train
to school.
Others may even take a boat!
Do you know any boys and girls who take
a plane?
There sure are many ways to get to school.
Camping with Bonk

A Reading A–Z Level I Leveled Book

Visit www.readinga-z.com for thousands of books and materials.
Bonk is brave.
He packs his blankie.
He packs his flashlight.
He packs a peanut butter and ladybug sandwich.
"I’m going camping," says Bonk.
Bonk hikes all by himself.
He sets up his tent all by himself.
He eats his sandwich all by himself.
Soon it is very dark.

Well, fireflies don't grunt, says Bonk.
Maybe it's the fireflies, says Bonk.
He hears grunting.
Bonk shivers.
He hears stomping.

"Maybe it’s a tree branch," says Bonk.

"Wait, tree branches don’t stompt!" says Bonk.

"Wait, the moon doesn’t screech!" says Bonk.

"Maybe it’s the moon," says Bonk.

He hears screeching.
Bonk is afraid.
His flashlight is broken.
His sandwich is gone.
Bonk hides under his blankie.

He listens to the noises growing louder.
He honks his nose.
He wipes his tears.
HONK!
Soon, there is grunting, stomping, and screeching all around the tent. Bonk jumps.

"Who is there?" asks Bonk.
"But my flashlight doesn’t work," says Bonk.
"I have no sandwich."
"My blanket is too small to share."
"That’s okay," says Snag.

Snag has a big, warm blanket.
Lurk has cheese and cricket sandwiches.
Uzzle has a flashlight.
Uzzle, Lurk, and Snag open their backpacks.
Bonk, Uzzle, Lurk, and Snag sing around the campfire. 
They wish on a star. 
They howl at the moon.

"Camping with my friends," says Bonk.

"What? asks Uzzle.

"Do you know what I like most about camping?" asks Bonk.
## Fluency

### Word Family Zoom

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**Fluency**

**Word Family Zoom**

- ay   - ill   - ip   - at   - am
  lay   fill   hip   sat   jam
  stay  hill   lip   flat  ham
  day   bill   ship  cat   ram
  play  thrill skip  mat   Sam
  hay   spill  trip  hat   am
  bay   chill  flip  bat   cram

- ag   - ack   - ank   - ick   - ell
  bag   tack   bank  sick   fell
  flag  crack  sank  trick  shell
  drag  black  tank  slick  bell
  lag   shack  blank brick  smell
  wag   track  crank chick dell
  rag   sack  drank thick sell
**Session-by-Session Anecdotal Notes and Planning Chart**

This chart must be completed following each lesson and emailed electronically to your research advisor. Your advisor will provide feedback to you regarding your plans and the level of detail included in your observations. The completed chart will be added to the appendix of your final paper and referenced in chapters 3 and 4.

<table>
<thead>
<tr>
<th>SESSION</th>
<th>INSTRUCTIONAL PLAN</th>
<th>SPECIFIC OBSERVATIONS FROM LESSON</th>
<th>CONCERNS/CHANGES WARRANTED</th>
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<tbody>
<tr>
<td>1</td>
<td>Intro (read a story) Administer SD Quick and fluency assessment Rhyme match and phonemic awareness Making words activity (sort into real and fake words) Introduce fluency rubric Student reads a story to me I read a story to A. modeling fluency</td>
<td>She enjoyed the making words activity and was able to correctly sort into real and fake words. On the San Diego Quick, she was able to make it through the 1st grade list, but could not complete the 2nd grade list. When reading, she has difficulty with phrasing, using punctuation cues, and expression. When redirected, she would attempt to make the changes. She understood the fluency rubric and was able to accurately evaluate herself.</td>
<td>A. is at a higher level than I anticipated. She was able to easily complete the phonemic awareness activities. She had a little difficulty remembering the beginning sounds of words, but was able to complete the assignment when prompted. The next session should challenge her a little more.</td>
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<tr>
<td>2</td>
<td>Phonemic awareness- delete the last sound to make a new word Phonics/word work- syllable segmentation of 2 syllable words, high frequency words Timed fluency tests- read list of words to see how many correct in a minute, read phrases and decide if the statement is true for one minute. Fluency- A. reads a leveled reader. She</td>
<td>A. was very thoughtful when completing word work tasks. Even when she did not catch on at first, she was reflective and able to get the hang of it. She really enjoyed the syllable activity and the high frequency word game. She effortlessly read the high frequency words. On the phonics test, of the 120 words she</td>
<td>According to the phonics test, A. made mistakes with the different word families and was consistent with her mistakes (she pronounced unk-ink, used the short a for all ai words, the short u sound for all ou words, ack for uck, was unable to read the ank word family, and would add or delete initial and final blends. Future Phonics instruction should focus on this. She does not need continued</td>
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rates herself. I provide feedback and she re-reads. This is done in manageable chunks. A reads a short passage to herself and asks me about any word she does not know. She reads aloud to me while I time. I record reading time. She evaluates herself and I provide feedback. I read modeling expression, we read together, she re-reads. New time is recorded. End the session with me reading aloud to her from *Box Car Children* correctly answered 93 words. She does well with short vowel sounds. The first time she read the first passage, she read 28 words in a minute and completed the entire passage in 2 minutes and 46 seconds. She made several errors, poor phrasing, did not pay attention to punctuation, and limited expression. She improved dramatically as we broke the passage down and re-read it. After feedback, she made one error and completed reading the entire passage in 1 minute and 31 seconds. Results of the fluency assessment show that she really needs practice in punctuation and expression.

| 3 | Phonemic awareness- delete the last sound to make a new word, last phoneme match, last phoneme switch | A had a little more difficulty today. She needed reminders of how to complete tasks. She did well on the phonemic awareness activities. She also enjoyed the syllable segmentation, however, she made errors approximately 20% of the time when segmenting words independently. She is trying her best to read with fluency. She went from solid 3’s to two 3’s and two 4’s after feedback. Phrasing was an area of difficulty. When I |
|   | Phonics/word work- syllable segmentation of 3 syllable words, read common ai words | She is doing well, however, more practice on all tasks is needed. |
|   | Fluency- A reads a story to me. She evaluates herself on the rubric. I provide feedback and she re-reads the story. This is done in manageable chunks. | |
|   | End the session with me reading aloud to her from *Box Car Children* | |
| 4 | Phonemic awareness- delete the last sound to make a new word, rhyming words  
Phonics instruction- syllable segmentation.  
Student will segment 1-4 syllable words  
Read decodable reader on level I. Student will read a few pages, then evaluate herself. I provide corrective feedback and she re-reads the passage. She evaluates herself on the second reading.  
A reads a short passage to herself and asks me about any word she does not know. She reads aloud to me while I time. I record reading time. She evaluates herself and I provide feedback. I read modeling expression, we read together, she re-reads. New time is recorded.  
End the session with me reading aloud to her from *Box Car Children*  
She continues to impress me with her dedication to her work. She talked herself through the phonemic awareness activity today. She was able to explain her thought process. She had a little more trouble generating rhyming words.  
During the syllable segmentation, she persevered through very difficult words. She was able to accurately count out the syllables in about 90% of trials. After the segmentation activity she asked if she could read. During her reading it was evident that she was trying to read with expression even though the passage was at a challenging level. She willingly read, re-read, and even read a third time sections of the book until desired fluency was met. She was thoughtful about her self evaluations, although she would over-estimate her fluency at times. During the timed reading, she had a |  
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Phonemic awareness is an area of difficulty. She especially struggles with rhyming. This will continue to be a targeted area. Fluency is showing some improvements especially in expression. Rate and Phrasing are still areas of improvement. |
marked increase in rate from the first observation. Made improvements from the first reading to her final reading. A. still appears to enjoy the *Box Car Children* story I read aloud.

| Session 6 | Phonemic awareness-
| Phoneme isolation-
| Phonics instruction-
| Vowel diphthongs, the student reads words with vowel pairs. Read decodable reader on level I. Student will read a few pages, then evaluate herself. I provide corrective feedback and she re-reads the passage. She evaluates herself on the second reading. A reads a short passage to herself and asks me about any word she does not know. She reads aloud to me while I time. I record reading time. She evaluates herself and I provide feedback. I read modeling expression, we read together, she re-reads. New time is recorded. End the session with me reading aloud to her from *Box Car Children* | A. was very tired today. She showed up late and had a hard time getting into activities. She was a little concerned that my adviser was observing the sessions. On both fluency exercises she did not demonstrate her best scores. On the test, she read more words during the first round than the second round. Overall, not our best session, however she did perk up at the end of the session. Phrasing and rate are still areas of concern. She did well with the phonics activity. |
| Session 8 | Phonemic awareness-
| Phoneme deletion and rhyme. Student had to delete the beginning, middle, or ending. | This was the best day for A. She mastered all of the basic skills activities (had a little more difficulty with | She still needs practice in rhyming. A. has made improvement with phoneme deletion. Fluency instruction should |
sound. Student had to create and match rhyming words. Phonics instruction-Final blends, vowel diphthongs, and word identification. Student read words with targeted phonics skills. Read decodable reader on level I. Student will read a few pages, then evaluate herself. I provide corrective feedback and she re-reads the passage. She evaluates herself on the second reading. A reads a short passage to herself and asks me about any word she does not know. She reads aloud to me while I time. I record reading time. She evaluates herself and I provide feedback. I read modeling expression, we read together, she re-reads. New time is recorded. End the session with me reading aloud to her from *Box Car Children*. 

Session 10

Post-test assessments:
- Independent reading level
- Instructional reading level
- Phonics
- Finish *Box Car Children*
- Rhyming activity

Ashley worked really hard today on all assessments. She became nervous with all of the testing which affected her overall scores. She showed less enthusiasm to complete the tests but did so willingly. She needed a few breaks.

Future instruction for A. should target phrasing and rate. Punctuation and Expression improved dramatically. A. would also benefit from continued instruction in phonemic awareness.
today, which was new for her. She excelled at the rhyming activity. She also enjoyed hearing the end of the book.

Adviser’s comments:
Visit #1 --- Excellent job giving the client Annie an opportunity to adjust to the session. She was extremely late and appeared to be VERY tired. So, she needed time to get focused and could not be rushed through intervention activities.

Visit #2--Annie was prompt and focused on working. You maintained an excellent pace and allowed Annie to make choices. This really increased her motivation.