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The Effects of Implementation of Reading Intervention on Students' Overall Comprehension

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The Effects of Implementation of Reading Intervention
on Students' Overall Comprehension

By

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A Graduate Field Experience

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This Graduate Field Experience

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Abstract

In an extension of research on the effect of implementing intervention for students with reading difficulties (Kim et al., 2009; Lang et al. 2009; O'Connor et al., 2007; Rogevich et al., 2008; Vaughn et al., 2010), the present study examined the effectiveness of implementing intervention for students with reading difficulties on students' overall comprehension. The researcher hypothesized that consistently implementing reading intervention with fifth grade students with reading difficulties would improve the students' comprehension. Five fifth graders participated in this eight-week study. Interventions implemented throughout the study included explicit modeling of word recognition strategies, narrative story structure, and expository text structure. Data collection and analysis focused on the participants' ability to read and comprehend text through questions designed to test the students' comprehension. The results revealed that the implementation of intervention resulted in positive gains for students' overall comprehension. Finally, recommendations for further research were presented.

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CHAPTER ONE: INTRODUCTION

Reading difficulties are one of the most challenging issues schools account for. A student who struggles with reading comprehension requires targeted intervention to address the critical literacy skills that the student lacks (Wang & Algozzine, 2008). To improve the reading skills of an underperforming student, it is important for educators to implement research based interventions that address the area with which the student is struggling (James, Jennifer, Fitzgerald, & Hartry, 2010). Research that was previously completed, specific criteria outlined by the Common Core Standards (2010), as well as my own research indicate the importance of a students' ability to comprehend text to become successful readers.

Many programs and practices are implemented in early elementary school to further prevent reading struggles in upper elementary and secondary school students, however, they are not always effective and thus there is a need for intervention for older students (James, et al., 2010). The National Reading Panel (2000) states that the five key components that all students, especially struggling readers, need guidance with include: phonemic awareness, phonics, fluency, vocabulary, and comprehension to become successful readers. Additionally, when reading comprehension is not developed, students are unable to understand what they are reading, even though it may appear as if the child can read the text fluently. These struggling readers will then continue to fall behind as they will not be engaged in reading and will in turn fall into the Matthew Effect, where poor readers have substantially less experience with text than successful readers (Stanovich, 1986). Therefore, when a student is unable to comprehend text, research based interventions should be implemented.

Interventions that are implemented for students early on in their educational career are more beneficial for students because they decrease the achievement gap. These interventions

that are employed should provide focused practice and monitoring of reading skills to improve the specific reading skills with which the student is struggling (Wang & Algozzine, 2008).

Students who struggle to comprehend text can benefit from being taught how authors structure text to help them organize information as they read and comprehend text (National Reading Panel, 2000; Snow & Sweet, 2003). Therefore, one specific intervention that can help improve reading comprehension is for a student to understand that there are different types of text structures and how these text structures are organized. This understanding will assist the student in comprehending text. Providing interventions for students who are struggling to comprehend is an important component for the students' overall reading ability.

In addition, the importance of comprehension to a student's overall reading comprehension has been deeply rooted in the Common Core State Standards (2010) which specify that all children, by the end of the school year, should be able to read and comprehend grade level text. The standards have been adapted by the state of Wisconsin, as well as 45 other states, and they outline the importance of reading comprehension to a child's overall successful reading ability. Furthermore, each grade level has additional specific skills that each student should be able to accomplish, which are entrenched in their ability to comprehend text. For example, students need to be able to quote accurately from the text to support inferences that they create while reading. If a student is unable to comprehend the text, other skills, such as creating inferences, will be further delayed. The state of Wisconsin adapted the Common Core Standards which requires that students achieve these skills and teachers be held accountable to help students accomplish them.

Teaching reading comprehension, specifically in the intervention format, became a topic of interest to the researcher when as a fifth grade teacher in a middle school, the researcher had

several students begin fifth grade without being able to comprehend grade level text. At times, students entered fifth grade without any interventions in place because they could fluently read the text and the students' lack of comprehension skills had not yet been identified. In other cases, students arrived in fifth grade having had reading intervention throughout their elementary school career (Kindergarten through fourth grade); yet, in the middle school setting interventions were not available, thus no interventions were put in place. Regrettably, many schools currently do not have specific interventions in place to support struggling readers as they progress through their educational career (Wang & Algozzine, 2008). According to the State of Wisconsin's Response to Intervention plan, it is imperative that such interventions be established and executed.

The goal for this study was to demonstrate that struggling readers benefit from the implementation of a consistent intervention. The research question was does the implementation of intervention in fifth grade impact the students' overall comprehension? The research that was conducted was completed during a twenty-five minute intervention block in a fifth grade middle school classroom. The participants in this study included five fifth graders who were reading below grade level as demonstrated by state standardized assessments.

In the district, approximately 92 percent of the school's populations were Caucasian, while the remaining eight percent of population were Hispanic, African American and Asian. The five fifth graders who participated in this study were Caucasian. This study was conducted over a six-week period with two additional weeks being used for pre and post assessments. The pre and post assessment used to monitor student's comprehension were the Qualitative Reading Inventory-5 (Leslie & Caldwell, 2011). Additionally, the Maze Passage Generator Assessments (2012) were used to monitor progress throughout the six weeks on a bi-weekly basis. The QRI-5

was used as a pre and posttest to help identify specific areas of concern for each student and then measure overall progress. From the results of the pretest an intervention plan was created. Specific interventions that were presented to students during the intervention block were narrative story structure, expository text structure, and word recognition strategies.

The significance of a student's comprehension to their overall reading ability has been supported by prior research, the Common Core State Standards, and executing this study. This process has provided the researcher with an understanding of the importance of research-based interventions which need to be put into place for struggling readers, regardless of their age. The research, as well as this process, has strengthened the researcher's understanding of the significance for improving literacy skills and comprehension for current students as well as future learners. The following chapter will discuss the research relating to the current study.

CHAPTER TWO: REVIEW OF THE LITERATURE

Struggling readers require interventions specific to their needs in order to become successful readers, though these interventions are not always implemented. To help support the lack of interventions in place for struggling readers, Response to Intervention (RTI) has provided framework for school-wide models in addressing students' struggles and then determining whether additional interventions are needed (Wanzek, Vaughn, Roberts, & Fletcher, 2011). RTI has been implemented in a number of school districts and has become a regular practice for many elementary students. However, considerably less is known regarding the RTI-type framework and implementation of interventions at the secondary level (Wanzek, et al., 2011) even though these students may need intervention. Struggling readers benefit from interventions designed to fit their needs when the interventions are implemented on a consistent basis, regardless of the readers' age.

This chapter summarizes studies that address the important questions pertaining to this action research project: What effect does reading intervention implemented have on a readers' ability to comprehend a text, specifically in regards to their age? What effect does consistency of implementing interventions have on a readers' ability to improve their comprehension and or fluency? The first collection of research presents the benefits of interventions provided for early readers. Then, research is examined to determine the effects of reading intervention on older struggling readers.

Reading Intervention Implementation for Early Readers

One of the challenges facing educators is how to effectively implement interventions in the early reading stages as opposed to how to implement interventions with readers in more

developed reading stages (Wanzek, et al., 2011). According to Response to Intervention (RTI), schools are required to provide valid and reliable measures to assess students' progress and a response to instruction when students are not meeting the appropriate standards (Neddenriep, Fritz, & Carrier, 2010). In this section, researchers studied methods that schools used in order to address gaps when students did not meet reading standards and were identified as struggling readers, specifically at the early reading stage. One study conducted by Neddenriep et al. (2010) incorporated their previous research and looked at how reading comprehension was affected by interventions that improved fluency. Additionally, another study created by Begeny (2011) researched the effects that a reading fluency program had when implemented in different frequencies. Furthermore, Bailet, Repper, Piasta, & Murphy (2009) conducted a study to examine the effectiveness of intervention targeting pre-kindergarten through third grade students at risk for reading failure. O'Conner, Fulmer, Harty, & Bell (2005) completed a study to determine the effect of reading intervention for students in kindergarten through third grade. Finally, Vernon-Feagans, Kainz, Amendum, Ginsberg, Wood & Bock (2012) conducted a study to test the effectiveness of targeted reading intervention and to determine which children may benefit from this type of intervention.

The study developed by Neddenriep et al. (2010) explored how an intervention affects students' fluency and thus their comprehension. The purpose of the study was to learn more about the relationship between changes in reading fluency and associated changes in comprehension for individual students. Based on recent research conducted in this area, the researchers believed that comprehension increased when fluency increased. The dependent variables were the three measures of reading proficiency that were assessed. These were oral reading fluency, errors per minute, and responses correct per minute. The independent variables

were fluency intervention, using passages and sight phrases from a standardized reading program versus the students who did not participate in intervention.

Participants included five fourth grade students, two boys and three girls. The teachers nominated the students based on the benchmark assessment data, which was collected in September. The school that the students attended was in a rural setting where 42% of students received free or reduced lunch.

Students partook in a brief intervention to increase their fluency. The students were exposed to repeat practice, performance feedback and error correction. They had the opportunity to practice the passage by reading it three times. When students were provided performance feedback, they were informed how many words they had read in one minute previously and then asked to read the current passage three more times. They were then told how many words they had read in one minute. When error correction was provided, they were told which words they had not pronounced correctly, or left out, and then prompted to reread that passage three more times. The number of words read correctly and errors per minute were graphed and compared to each student's baseline data. This concluded the brief intervention assessment to help gather baseline data.

After baseline data was gathered, students participated in an extended assessment. Students practiced the intervention strategies and received performance feedback. The program the students used included passages and sight words and phrases from a standardized reading program. Four of the students were grouped in pairs by similar reading levels. The remaining students worked with three adults for 30 minutes two days a week for 12 weeks. Students repeatedly practiced passages until they successfully read the sight phrases without errors in one

minute and passages with two or fewer errors in one minute. This data was then compared against individual baseline data.

The authors discovered that for all five participants, performance and practice was effective in increasing the number of words read correctly per minute. The addition of error correction led to a higher rate of words read correctly for three of the five participants with five or fewer errors for four of the five participants. Therefore, it was determined that the addition of error correction was beneficial to help students become fluent readers. Overall, participants demonstrated an increase of 25% above baseline data. Two of the five students increased their word knowledge adequately enough to predict a change in comprehension. Overall, four of the five students increased their comprehension and reading fluency such that they were reading at an instructional or mastery level. It was determined that one student did not increase his fluency and comprehension to mastery or instructional because he was not at the recommended 90 correct words per minute prior to the intervention. The implementation of this intervention proved to be successful.

Similarly to Neddenriep et al. (2010), Bailet et al. (2009) conducted a study to examine the effectiveness of intervention targeting pre-kindergarten through third grade students at risk for reading failure. The purpose of this study was to assess the effectiveness of targeted intervention to teach emergent reading skills to at risk preschoolers. The researchers hypothesized that at-risk children would demonstrate noteworthy and significant gains in their pre-reading skills due to the implemented intervention. The independent variable was reading intervention, students who received reading intervention versus students who did not receive intervention. The dependent variables were the results of a standardized reading assessment that

measured emergent literacy skills such as print awareness, knowledge of letter names and sounds, and beginning phonological awareness skills.

The sample population consisted of 744 children attending pre-kindergarten, all of whom were four years old. Two hundred and twenty of these students were identified as at risk for reading failure. Of this population, 52 percent were male while 48 percent were female. Furthermore, 45 percent were Caucasian, 44 percent were African American, and seven percent were Asian, Hispanic, or Native American. All students were from socioeconomically disadvantaged families.

Teachers hired to implement the project delivered the intervention. The curriculum entailed 18, 30 minute sessions delivered over a nine week period. The lessons focused on early literacy skills with activities such as letter names and sounds, syllable counting and segmentation, rhyming, alliteration, and onset-rime. These skills were explicitly taught to students. All lessons included multisensory materials and large muscle movements.

The results of the intervention demonstrated that there was a significant effect on students' progress from fall to winter due to the implemented intervention. The major conclusion was that at-risk students in preschool made significant gains in response to the nine week intervention that was implemented. Students made extensive gains with rhyme and alliteration recognition. Additionally, these students made noteworthy gains in their phonological awareness, vocabulary, print and letter knowledge.

O'Conner et al. (2005) completed a study to determine the effect of reading intervention for students in kindergarten through third grade which was similar to the study conducted by Baillet et al. (2009). The purpose of this study was to determine what proportion of students

continued to struggle despite early interventions. The authors' hypothesis was that students who were provided early interventions would not continue to struggle with comprehension. The independent variable was early reading intervention, students who received early intervention versus students who did not receive early intervention. The dependent variables were the results of a standardized reading assessment that measured word recognition and comprehension.

The sample population included 206 students from kindergarten and grade one from two different schools. One school was located in a low socioeconomic area where fewer than ten percent of parents had attended college. Two percent of the population were Hispanic, three percent Native American, 12 percent African American and 83 percent European American. School two was located in an urban environment and was affiliated with a local university. Many of the students' parents were highly educated and paid tuition for their students to attend this school. The ethnic backgrounds were 15 percent African American, 57 percent European American and 28 percent other.

Each session began with research-based interventions. The interventions included phonemic awareness, phonics, vocabulary, and comprehension strategies such as developing the main idea, retelling, and summarizing. The teacher modeled and scaffolded how the students would use the strategies and provided time for students to practice the strategy. The teacher then delivered ongoing support and feedback while the students were practicing the strategy to help the students learn more about the strategy. In addition, the teacher worked with small groups for differentiated instruction for 20-25 minutes three times per week.

The results of the intervention indicated that early and continuous intervention for at risk students improved the students' reading outcome. Reading difficulties were reduced for students with regards to foundational skills, phonemic awareness, phonics, word recognition, and fluency.

Comparable to O'Conner et al. (2005), Vernon-Feagans et al. (2012) conducted a study to test the effectiveness of targeted reading intervention and to determine which children may benefit from this type of intervention. The purpose of this study was to examine the effects of using target reading intervention with students. The researchers hypothesized that struggling readers who received targeted reading intervention in kindergarten and first grade would make progress to meet grade level standards. The independent variables were receiving target reading intervention, students who received targeted reading intervention versus students who did not receive targeted reading intervention. The dependent variable was a standardized reading test which assessed phonological awareness.

A number of kindergarten and first grade children were chosen to participate in the study. The schools from which students participated were Title 1 schools in the rural Southeastern United states. Of the students, 65% of them were eligible for free or reduced lunch, 142 of the students were girls and 134 were boys, and one third of them were Caucasian.

Students participating in the study completed a pre assessment using a standardized reading assessment to determine phonological awareness and determine a baseline. The targeted reading intervention was then implemented as a tier two intervention. The classroom teacher delivered instruction in a one-on-one session with struggling readers for 15 minutes a day for four days a week as a tier two intervention. During this targeted reading intervention, teachers led students in rereading for fluency, word work, and oral reading. A reading coach provided

consultation with the classroom teacher to determine when the child would benefit from participating in general education classroom reading instruction. When a child could successfully work on their own the child was transitioned into a small group setting.

The study determined that students receiving targeted reading intervention made significant gains from the focused instruction they received. Students participating in this reading intervention outperformed their peers that did not receive this same intervention. Using the classroom teacher to provide this intervention proved to be an effective way to reach struggling readers.

Similar to Vernon-Fegans et al. (2012), Begeny (2011) created a study to explore the effects of a standardized reading fluency program and how effective the program was when implemented at a different frequency. The purpose of this study was to examine the effects of the standardized reading program when implemented at different frequencies during a given week and to see whether the intervention would be equally effective if the intervention was implemented less frequently or if it needed to be implemented at a consistent frequency. The researcher hypothesized that with the implementation of the standardized reading program over a longer period of time, students' comprehension would improve. The independent variables were the frequency of the standardized reading program intervention, students who received the standardized reading program intervention three times a week versus students who received the standardized reading program intervention one or two times per week versus the students who did not receive any intervention. The dependent variable was a standardized reading fluency test.

A number of second graders were chosen to participate in this study. The 90 students were randomly divided into three groups: those who received intervention three times per week, those who received intervention one to two times per week, and those who would be in the control group. Of the participants, 45 of the participants were female, 45 were male. Additionally, 61% were Caucasian, 11% were African American, 19% were Latino, and one percent were Asian. Furthermore, eight of the students had previously been retained in a grade level. Moreover, 34% of students received free or reduced lunch and 12% qualified for special education services.

All students participating in the study continued to receive the typical language arts curriculum throughout the study. Pre assessments were conducted using a standardized reading assessment that tested oral reading fluency in order to determine a baseline. The group receiving the standardized reading program three times a week received one instructional intervention session every Monday, Wednesday, and Friday. The group receiving the standardized reading program one to two times per week would alternate between one and two sessions on a weekly basis. The standardized reading program included eight evidence based strategies which have been proven in previous research to improve students reading fluency. The strategies include the following: repeated reading, modeling, phrase-drill error correction, two verbal cueing procedures, goal setting, performance feedback, and a motivational/reward system. The strategies were taught with specific and clear direction. The control group only received their typical language arts curriculum.

The study determined that the students receiving the standardized reading program intervention three times per week significantly outperformed the control group on measures of fluency and comprehension. Students who were receiving the intervention one or two times per

week also outperformed the students who were in the control group. There was no statistically significant difference between the groups that received intervention one to two times per week or three times per week.

The studies in this section provided insight and recommendations about how interventions implemented for early readers affects students' comprehension and overall reading skills as well as how consistency of implementation can have an effect on comprehension. The studies confirmed that when children participated in an early reading intervention on a consistent basis their reading comprehension and skills increased (Bailet et al., 2011; Begney, 2011; O'Conner et al., 2005; Neddenriep et al., 2010; Vernon-Fegans et al., 2012). In order for schools to meet the needs for all students, RTI should be implemented to close the gap for struggling readers (Neddenriep, et al. 2010). In the following section the influence of reading intervention implementation for older readers is examined.

Reading Intervention Implementation for Secondary Readers

In order for older students to increase their reading comprehension, strategies need to be explicitly taught. In this section, researchers studied methods that schools used in order to address gaps for struggling readers, specifically at the secondary level. One study conducted by Van Keer (2004) researched the effects of students' need to have opportunities to interact with texts to promote the use of these reading strategies. Additionally, another study created by Vaughn, S., Cirino, P. T., Wanzek, J., Wexler, J., Fletcher, J. M., Denton, C. D., Francis, D. J. (2010) explored the effectiveness of a yearlong, Tier 2 intervention with sixth graders. Furthermore, the research study generated by Rogevich & Perin (2008) explored the effectiveness of implementing reading intervention in adolescents who had behavioral disorders.

The study conducted by Wanzer, et al. (2011) explored the effectiveness of a reading intervention for middle school students with learning disabilities. An additional study by O'Connor et al. (2007) explored whether implementing a reading rate intervention, without a similar instructional focus on word recognition, word meanings, and text meanings, would generate improvement on students' reading comprehension. Lang et al. (2009) conducted a study to explore the effectiveness of implementing reading interventions with older students, specifically high school students. Finally, Kim et al. (2009) conducted a study to explore the effectiveness of a mixed-method approach to literacy intervention and to examine whether two print exposure measures in a standardized reading program explained differences in reading outcomes.

Students need opportunities to interact with texts to promote the use of these reading strategies (Van Keer, 2004). The researcher conducted a study to explore the effects of explicit reading strategies instruction and engagement of students in interaction about text to promote reading comprehension. Based on recent research conducted in this area, the researcher believed that students would increase their reading comprehension when they were explicitly taught reading strategies and had an opportunity to actively engage in conversations about text. The independent variables were the teaching of explicit reading comprehension strategies, students who received explicit instruction in reading comprehension strategies versus students who did not receive explicit reading comprehension strategy instruction. The dependent variable was a standardized reading comprehension test.

Twenty-two fifth grade teachers and 454 students from 19 different schools participated in this study. This study included both girls and boys, with an approximate even gender distribution. The age of students ranged from nine to twelve. The population of the intervention

students was mainly Caucasian, which represented the student population. Class sizes ranged from 10 to 30. Teachers were randomly assigned to which group they were teaching.

Following the pretest of all students, the teachers began to explicitly instruct students on a variety of reading strategies intended to help improve their reading comprehension. The teachers instructed students on six strategies. The six strategies taught were activating background knowledge and imagining what the text could be about, predictive reading and verifying the predictions made, distinguishing main issues from side issues, monitoring and regulating the understanding of words and expressions, monitoring and regulating comprehension by tracing the ideas expressed in difficult sentences, or passages, and classifying text genres and adjusting reading behaviors. Each of the strategies was explicitly taught in the same manner. First, the teacher would explain and explicitly model the strategy in a whole class lesson by using the think aloud model. Then students participated in a practice and coaching stage, where teachers used multiple examples to model the strategy and practice it with the students. During this time teachers explicitly scaffolded and coached students to engage them in applying and reflecting on their use of the strategy. Finally, students were encouraged to use the strategy independently. A standardized test was then used as a posttest to measure the student's progress. Finally, six months later, a retention test was also administered to determine how well the students had maintained the knowledge that they learned through the intervention.

Using previous research and the findings from this study, Van Keer determined that explicitly instructing reading strategies was a useful tool to increase fifth graders' reading comprehension. Additionally, it was determined that utilizing greater time reading and practicing the strategies also contributed to these gains. However, the correlation between the explicit reading strategy instruction and the retention of this knowledge six months later was not

able to be determined because there were many differences in instruction between teachers from the first year to the second and student reading habits to determine whether the intervention impacted the students' skills. It was determined that in order to develop proficient readers, explicit instruction on reading strategies is needed.

Explicit Instruction on reading strategies and the fidelity for implementing interventions for older readers has been a challenge for many educators because there are many time constraints on scheduling. The study conducted by Vaughn et al. (2010) explored the effectiveness of a yearlong, Tier 2 intervention with sixth graders. The intervention stressed word recognition, vocabulary, fluency, and comprehension. The purpose of the study was to determine the effectiveness of researcher provided intervention with older students who had reading difficulties. The author's hypothesis was that the Tier 2 interventions would result in improved outcomes for students and the intervention implemented would begin to close the gap between those with reading difficulties and those without reading difficulties. The independent variable was reading intervention, students with an achievement gap versus students without an achievement gap. The dependent variables were the results of a standardized reading assessment which assessed word reading accuracy, word list fluency, and comprehension.

The sample population consisted of sixth grade students from seven different middle schools. Three of the schools were in a large urban district and the remaining four were in smaller districts. Of students in the different districts, 40 to 86 percent qualified for free or reduced lunch.

During phase one of the intervention, students participated in 25 lessons taught during a seven to eight week period. Lessons emphasized word study and fluency. Students were

engaged in repeated reading lessons with a partner to increase their reading fluency. In addition, students received daily instruction and practice with individual letter sounds, letter combinations, and affixes during this time. Furthermore, students were provided instruction and practice with their ability to decode and spell multisyllabic words. Vocabulary was also addressed each day by teaching the meaning of the words through definitions and examples versus non-examples of each word. The new vocabulary words were reviewed on a regular basis. Finally, comprehension was taught by asking students to think about inferential and literal questions relevant to their reading. During phase two of the intervention, lessons were demonstrated over 17-18 weeks, depending on the student's progress. The lessons began with a daily review of strategies taught in phase one. Next, word relatives and parts of speech were modeled for the students. In addition, fluency and comprehension were taught three times per week by reading and comprehending both narrative and expository text. Students were explicitly taught to generate questions while they were reading, how to identify the main idea, how to summarize, and strategies to answer multiple choice questions related to the text.

The findings indicated that the goal of closing the achievement gap between students who received intervention and those who were reading at grade level was overly ambitious. Students who received intervention, however, did demonstrate an increase in proficiency based on pre and posttest results.

Comparable to Vaughn et al. (2010), the research study generated by Rogevich & Perin (2008) explored the effectiveness of implementing reading intervention in adolescents who had behavioral disorders. The purpose of the study was to measure the effectiveness of reading intervention with a group of students who had behavioral disorders compared to students who had Attention Deficit Hyperactivity Disorder (ADHD). The authors' hypothesis was that all

students who participated in this study would benefit from reading intervention, but that those with ADHD would not make as much progress as students who only suffered from behavioral disorders. The independent variable was reading intervention, students with behavioral disorders versus students with behavioral disorders and ADHD. The dependent variables were the results of a standardized reading assessment and a written summarization test.

The sample population consisted of sixty-three boys who attended a long term program for behavioral disorders. The researcher did not include students who suffered from anxiety, psychotic, or depressive disorders. The students ranged in age from 13 through 16 years old and were in seventh through tenth grade. Of this population, 35 percent were Caucasian, 41 percent were African American, and 24 percent were of Hispanic descent. All of the students were of low socioeconomic status based on free and reduced lunch and had been found guilty of a crime such as sexual abuse, larceny, or assault.

The authors discussed the intervention that was provided to the students. The researcher interacted with the students in groups of three or four students during eight sessions. Prior to the intervention, the researcher instructed the students to read a text, which was science or social studies related, and write a summary of what they had read. Students had fifteen minutes to write the summary. The summary was then scored using a researcher created rubric. The researchers used the scores to design an appropriate intervention. Then the researcher introduced the intervention strategy. The strategy involved accessing background knowledge, thinking about the author's purpose while reading, identifying the type of text structure, and then to complete a KWL (Know, Want to know, Learn) chart regarding the text they read. When they were finished reading, the student was asked to make connections to what they read. This process was reviewed over eight sessions.

The results of the intervention demonstrated that students who had ADHD did not make any less significant gains than those students who did not have ADHD; however, ADHD did appear to interfere with the students' ability to apply new strategies to their reading over time. All students made significant gains from the intervention that was implemented.

Similar to Rogevich et al. (2008), another study evaluated if reading interventions implemented for older students with learning disabilities can improve comprehension. The study conducted by Wanzer, et al. (2011) explored the effectiveness of a reading intervention for middle school students with learning disabilities. The purpose of this study was to determine whether students who are identified as having learning disabilities, and who have demonstrated reading difficulties, would benefit from a supplemental, remedial intervention in addition to their typical literacy curriculum. These students were then compared to students with learning disabilities who were not receiving this intervention. The authors' hypothesis was that students who were randomized to a supplemental reading intervention would outperform students who participated in non-reading elective classes, on both word reading and comprehension outcomes. The independent variable was reading intervention, students who have learning disabilities who received additional reading intervention versus students who have learning disabilities who did not receive additional reading intervention. The dependent variables were the results of standardized reading assessments that tested reading efficiency and fluency.

The sample population consisted of sixth to eighth grade students who had been identified with learning disabilities. The standardized test results from the prior spring were used to determine who was a struggling reader from this group of students. The sample population consisted of 58% African American, 12% Caucasian, and 26% Hispanic. Of this sample population 64% of the students qualified for free or reduced lunch.

The students with learning disabilities who were in this treatment group were randomly assigned to an additional class period of approximately 45-50 minutes per day of reading intervention. The intervention occurred during the regular school day, during an elective time and did not replace any core content instruction. The intervention included vocabulary and comprehension techniques with opportunities for discussion to ensure students' understanding of the text. Additionally, there was also explicit instruction in English phonology, recognizing high frequency words accurately and quickly, and a strategy implemented for applying phonetic elements to reading multisyllabic words. The strategies were specific areas of struggle that were identified by past research (Wanzer et al., 2011). The process included three phases of intervention techniques. The first phases stressed word recognition and fluency with additional instruction in vocabulary and comprehension. The second phase emphasized vocabulary and comprehension with additional instruction in applying word recognition and fluency elements learned in phase one. Finally, phase three continued an instructional emphasis on vocabulary with more time focused on independent application of skills and strategies introduced in phase two. Students who were in the comparison group continued to participate in the elective class instead of the intervention class.

The intervention for the treatment group was conducted within the context of a school-wide RTI effort. The results of the intervention for the treatment group demonstrated that students who received the supplemental intervention outperformed the control group on sight word fluency and maintained their standard scores on all measures except phonemic decoding fluency. Additionally, there was no significance difference between untimed measures of word reading, word attack, or passage comprehension between the treatment and control group.

Another study was piloted regarding specific interventions conducted within a school reading program. O'Connor et al. (2007) led a study to explore whether implementing a reading rate intervention, without a similar instructional focus on word recognition, word meanings, and text meanings, would generate improvement on students' reading comprehension. Based on recent research conducted in this area, the researchers believed that practicing reading rate would improve struggling readers' comprehension. The independent variable was repeated reading intervention, students who participated in repeated reading intervention versus students who did not receive additional intervention. The dependent variables were the results of standardized tests that measured receptive vocabulary, word identification, comprehension, reading accuracy, and reading rate.

The sample consisted of 48 students who scored greater than 69 on a standardized vocabulary test to ensure that they could read enough words to benefit from practice reading orally and would have enough English Language ability to benefit from reading texts in English. Half of the students were in fourth grade and half were in second grade. Fifty percent of the students were European American, 29% were Hispanic, 18% African American, and three percent other. Additionally, 16 were eligible to receive special education services for learning disabilities. Finally, seven students spoke English as their second language.

The authors only discussed procedures of the study that related to the students' intervention. Students were randomly assigned to one of two types of read aloud practice, or a control group in which they were pretested. In the control group, students received regular school supplied literacy instruction. Students who participated in the intervention practiced reading aloud repeated readings to a trained adult listener. This occurred three times per week for 14 weeks using repeated reading or continuous reading. The research team prepared a daily

log that listed each student, their reading material, and their number of words read correctly. After the intervention was completed students were post tested to determine their progress.

The authors determined that there were no significant differences from the treatment of the intervention between grade levels (second and fourth). Additionally, results demonstrated that the rate of growth for students in intervention was significantly faster than the students in the control group with regards to fluency. Furthermore, there was significantly higher growth for students receiving intervention for word-identification and passage comprehension. Conversely, there were no significant differences between the control group and the students receiving intervention in regards to vocabulary growth.

Similar to O'Connor et al. (2007), Lang et al. (2009) conducted a study to explore the effectiveness of implementing reading interventions with older students, specifically high school students. Based on recent research conducted in this area, Lang et al. (2009) believed that implementing reading interventions with high school students would improve their reading comprehension skills. The independent variable was implementing reading intervention, students receiving reading intervention versus students who did not receive this intervention. The dependent variable was a standardized test that measured student achievement in reading.

Seven high schools were chosen to participate in this study. 1,265 ninth graders were identified as struggling readers, based on the previous year's standardized assessment. 385 of the students were categorized as reading below a fourth grade reading level. 812 of the students were reading between a fourth and sixth grade level. There were a variety of ethnic groups represented: 50.6% were Caucasian, 20.4% were Latino, 20.4% were African American, and 8.6% were other. Slightly more of the students participating were female. Forty-three percent

were identified for free and/or reduced lunch. Students with disabilities and limited English proficiency were included in this study as well.

Following the standardized test that determined prior reading levels for the students, students were randomly dispersed into their treatment or control group. Each student participated in a 90-minute intervention class. No more than 21 students were in each intervention class. The intervention period began with 20 minutes of teacher led whole group instruction. Then students participated in small group instruction and independent reading for the remaining 60 minutes. During this time students practiced comprehension skills, vocabulary skills, and self-monitoring skills. The class ended with a ten-minute summary activity where teachers summarized and reviewed content with students in a whole class activity.

The authors found that students participating in this intervention block did make gains towards improving their overall reading skills. It was found, however, that students who enter high school significantly behind grade level would require more than one year to make significant progress towards reading on grade level.

Comparable to Lang et al. (2009), Kim et al. (2009) conducted a study to explore the effectiveness of a mixed-method approach to literacy intervention and to examine whether two print exposure measures in a standardized reading program explained differences in reading outcomes. Based on recent research conducted in this area, the authors believed that students' reading ability would improve through literacy intervention using the standardized reading program more than the district's after school program. The independent variable was the type of intervention receive, district after school program versus the standardized reading program. The dependent variables were standardized tests that measured word reading accuracy, fluency,

ability to read connected text, vocabulary, sentence comprehension, passage comprehension, and mastery of the curriculum frameworks in content areas.

Students who participated in this survey were in a high-poverty district located in southeastern Massachusetts. A large percent of the students were struggling readers in elementary school, grades four to six. Students were eligible for the study if they scored below proficient on the state standardized test in the English language arts assessment. African American and Latino children comprised over 70% of the sample and 81% of the children received free or reduced-price lunch.

Following the standardized test which determined students' eligibility, the students were randomly dispersed into two different groups, students who received the district after school intervention program and students who received the standardized reading program. For both sections, the session began with a snack and homework assistance. Next, teachers followed curriculum in either the district after school program or the standardized reading program. The standardized reading program differed from the district after-school activities because of its exclusive focus on improving children's reading skills. During the individualized intervention, students in the standardized reading program participated in scaffolded reading practice with videos, leveled text, and word reading and fluency activities. Students were also provided with opportunities to practice spelling and reading words that were embedded in the text. Finally, there were small group lessons in which teachers helped students read phonetically challenging words, modeled fluent reading and reviewed comprehension strategies. The district after-school program included both literacy and non-literacy related activities. The teacher implemented mini lessons in the district after school program, which included themed activities that focused on history or space exploration. Other programs focused on math practice, help with reading

vocabulary, and cultural awareness. Students were given both pre and post observations to determine baseline data.

The authors determined that no significant impact on norm-referenced measures of word reading efficiency and reading comprehension and vocabulary. There were also no significant effects on the standards based state assessment. Both the students who participated in the districts after school program and the standardized reading program made gains on their reading efficiency and reading comprehension, suggesting that curriculum and instruction in each after school program was effective in help improving reading. It was also determined that there was no evidence of poor fidelity of implementation of the standardized reading program.

The studies in this section provided insight and recommendations on how to implement intervention programs for older students, as well as the intervention effectiveness. The studies confirmed that interventions need to be provided for older students as well as implemented on a consistent basis to help improve a student's reading ability. Reading difficulties continue to be prevalent in fourth grade and beyond and therefore interventions need to be implemented (Kim et al., 2009; Lang et al. 2009; O'Connor et al., 2007; Rogevich et al., 2008; Van Keer et al., 2004; Vaughn et al., 2010; Wanzer et al., 2011).

Conclusion

One factor contributing to successful reading development is implementation of reading interventions at all grade levels. The first section of this chapter reviewed the best methods for which teachers can employ specific interventions for early readers. It was determined that when reading interventions are done with fidelity and on a consistent basis, students reading abilities increase dramatically (Bailet et al., 2011; Begney, 2011; O'Conner et al., 2005; Neddenriep et

al., 2010; Vernon-Fegans et al., 2012). Furthermore, because of the RTI initiative, all schools should be implementing a reading intervention for struggling readers to help close the gap (Neddenriep et al., 2010).

The second section of research in this chapter revealed that even older readers require interventions for struggling readers. There was evidence in all studies that struggling readers who receive an intervention on a consistent basis will improve their reading abilities, regardless of their age. The studies summarized in the second section provided research that proved students who are struggling readers, but receive instruction tailored to fit their needs, can become more successful readers (Kim et al., 2009; Lang et al. 2009; O'Connor et al., 2007; Rogevich et al., 2008; Van Keer et al., 2004; Vaughn et al., 2010; Wanzer et al., 2011).

The RTI framework for tier one is broadly defined as providing universal screening, on going progress monitoring, and/or curriculum-based measurements with research-based classroom instruction (Wanzek et al., 2011). However, sometimes this instruction is not enough for students, thus an intervention is needed to help students become successful readers. For these reasons, interventions should be consistently implemented with fidelity for all students, regardless of age. The following chapter will discuss the procedures for the current study.

CHAPTER THREE: PROCEDURES FOR THE STUDY

The purpose of this action research study was to show that struggling readers benefit from the implementation of a consistent intervention. Based on classroom observations, many fifth grade students arrive in middle school in need of a comprehension intervention, however interventions are often not implemented, nor are there time periods when interventions could occur in students' daily schedules. Therefore, an intervention block was implemented by the school district at the secondary level in which the study took place so that struggling readers would be provided with the necessary interventions on a consistent basis.

The information presented in this chapter explains the different strategies that were implemented with the students on a consistent basis to help improve the students' comprehension. Additionally, in this chapter, the sample population, the procedures, the data collection and the summary are explained.

Description of Sample Population

The study was conducted at a suburban middle school in the Midwest. The district serves over 5,000 students between the ages four to nineteen with regular and special education for students in pre-kindergarten through twelfth grade. Fourteen percent of enrolled students are economically disadvantaged. The median household income is \$82,400.

The district has five elementary schools, kindergarten through grade four; two middle schools, grades five through eight; and one high school, grades nine through twelve. Additionally, the school manages a pre-kindergarten program for students age four.

The district mission of this school district is: Every student learning growing and succeeding and the middle schools share this mission statement. The middle schools serve 1,483 students. The ethnicities of the middle schools are as follows: American Indian- 0.3%, Asian- 1.8%, Black- 0.9%, Hispanic – 4%, Pacific Isle 0.2%, and White 92.4%. Additionally, 15.7% of the students are economically disadvantaged. Furthermore, 9.4% of the middle school population is designated special needs.

The class that participated in this study was a fifth grade literacy intervention block. There were five students involved, all ten years of age. One of the students who participated in this study was female and the remaining four were male. All five students were Caucasian. One of the students received special education services, though no services related to literacy.

Description of the Procedures

This eight-week study occurred during the second quarter of the regular academic school year. The lessons commenced during the fifth period of every other day, during a twenty-five minute intervention block. The action research study occurred during the entire time period in which the students learned and practiced specific reading strategies.

Prior to the beginning of the study, the classroom teacher sent permission slips explaining the research project and requesting the students' parents sign and verify their son or daughters participation in the study. During the first week of the study, the classroom teacher administered the word list, starting at level one, from the Qualitative Reading Inventory-5 (QRI-5) (Leslie & Caldwell, 2011) to the students to determine which level passage to test the students with. The researcher then determined which level passage each student should be assessed by using their instructional level as determined by their performance on the graded word lists. For example, if

the student's instructional level of the word list was level two; the student was then assessed using the expository level two passage. After the instructional level was obtained using this process, the classroom teacher analyzed the test results to determine specific areas of need for each student to create an intervention plan.

On the first day of the study, the classroom teacher explained that the students would arrive at their intervention block with their reading text from their literacy class and be prepared to learn comprehension strategies that would help the students improve their reading skills. At the end of each comprehension block the classroom teacher would reiterate the skill that was practiced during that day and remind the students to continue to practice the skill each time they were reading (see Table 1).

Table 1

Intervention Schedule Week 1

Day of the Week	Time Length	Activity
Monday	Twenty Five Minutes	<ul style="list-style-type: none"> • Testing of QRI-5 with individual students • Other students Reader's Theater
Wednesday	Twenty Five Minutes	<ul style="list-style-type: none"> • Testing of QRI-5 with individual students • Other students Reader's Theater
Friday	Twenty Five Minutes	<ul style="list-style-type: none"> • Testing of QRI-5 with individual students • Other students Reader's Theater

During the first week of the research study, the researcher assessed individual students using the Qualitative Reading Inventory-5 (Leslie & Caldwell, 2011). First, the teacher determined the student's instructional reading level, using the word lists. Next, the researcher began at the level one grade list and continued until the student reached a level of frustration. The researcher then used the instructional level expository passage to assess the student's comprehension skills. This data was then analyzed to determine specific intervention strategies for each student. While individual students were being tested, the remaining four students participated in a reader's theater to practice their reading fluency skills (see Table 2).

Table 2

Intervention Schedule Weeks 2-3

Day of the Week	Time Length	Activity
Tuesday	Twenty-five minutes	Word Recognition Strategies
Thursday	Twenty-five minutes	Word Recognition Strategies
Monday	Twenty-five minutes	Word Recognition Strategies
Wednesday	Twenty-five minutes	Word Recognition Strategies
Friday	Twenty-five minutes	Word Recognition Strategies

During weeks two and three, the classroom teacher demonstrated word recognition strategies to help students improve word recognition and decoding skills. Specifically, students learned the different syllable types and how to use these to decode words that they didn't initially

recognize. The different syllable types that were reviewed with students were closed syllables, open syllables, vowel consonant syllables, r-controlled syllables, vowel pair syllables, and consonant-le syllables.

The classroom teacher began by explaining the word recognition strategy they were going to utilize. She then modeled how to use the strategy by demonstrating how to use the phoneme graphing mapping strategy for approximately five minutes. Then students practiced one word together using this new strategy for approximately two minutes. After students understood the concept, they began to work independently on mapping other words using the same syllable type, while the teacher monitored progress for approximately ten minutes. After students finished mapping the ten words, the class went through and reviewed the answers together for approximately five minutes. The classroom teacher then reminded students of the importance of using this strategy when they encounter a word they do not initially recognize (see Table 3).

Table 3

Intervention Schedule Week 4-5

Day of the Week	Time Length	Activity
Tuesday	Twenty-five minutes	Narrative Story Structure
Thursday	Twenty-five minutes	Narrative Story Structure
Monday	Twenty-five minutes	Narrative Story Structure
Wednesday	Twenty-five minutes	Narrative Story Structure

Friday	Twenty-five minutes	Maze Passage Narrative Story Structure
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During weeks four and five, the classroom teacher demonstrated narrative story structure and how to identify story elements. Specifically, students learned how to plot out the parts of a story. Students were instructed to recognize characters, setting (specifically time and place), main conflict, rising action or events of the story, and the resolution.

On Tuesday, day one of week four, the researcher began by explaining different story elements. The researcher then modeled how to complete a story map for approximately fifteen minutes, by using a familiar story with the students. Then students practiced identifying the events of the story to help complete the story map graphic organizer for approximately seven minutes. The last two minutes of day one was spent reminding students why this strategy was important.

On Thursday, Monday, and Wednesday, the classroom teacher began by reminding students how to map narrative story structure for approximately ten minutes. During the remaining fifteen minutes, students read a narrative story and completed the story map organizer with a partner. On Friday, students began class by completing a progress monitoring assessment. The assessment used was the Maze Passage Generator (Intervention Central, 2012). The researcher explained how to complete the Maze Passage Generator Assessment for approximately five minutes. Then the students were provided two and a half minutes to read the level five passage and choose the correct word out of three choices to complete the sentence. Next, the researcher directed students to use the remaining class period to read a narrative story and complete a story map independently using the skills they had been practicing in class. The

last two minutes of class the classroom teacher reminded students of the importance of using this strategy when they read their independent narrative text (see Table 4).

Table 4

Intervention Schedule Week 6-7

Day of the Week	Time Length	Activity
Tuesday	Twenty-five minutes	Expository Text Structure
Thursday	Twenty-five minutes	Expository Text Structure
Monday	Twenty-five minutes	Expository Text Structure
Wednesday	Twenty-five minutes	Expository Text Structure
Friday	Twenty-five minutes	Maze Passage Expository Text Structure

During weeks six and seven, the classroom teacher demonstrated the different types of expository text structure. Specifically, students learned about the different types of text structure that exist: description, cause and effect, compare and contrast, sequence and problem and solution. Students received a chart that explained the different text structures, signal words and signal questions for each text structure to help them determine which text structure they were reading.

On Tuesday, day one of week six, the classroom teacher began by explaining the different text structures and why it was important to understand the different types of expository structures. The researcher then explained the chart and how students could use it to help them

identify the different types of text structures. She then modeled how to identify the type of text structure using a one paragraph example for approximately five minutes by reading the paragraph out loud to students and showing the students how to use the chart to look for signal words and questions that would help determine the type of text structure. Then students practiced identifying the type of text structure on a second paragraph together for approximately five minutes using this same process. The last fifteen minutes of day one was spent allowing students to finish reading the remaining paragraphs and identifying the type of text structure with their partners.

On Thursday, Monday, and Wednesday, the classroom teacher began by reminding students how to identify the type of text structure using their chart of signal words and questions for approximately five minutes. Then the teacher modeled how to identify the text structure of a section of their grade level social studies text. Students spent the remaining twenty minutes reading sections from this text book and following the process of summarizing what they had read, underlining key words/phrases from the chart, and answering signal questions to determine the text structure of their social studies text book with their partner. On Friday, students began class by completing a progress monitoring assessment using the Maze Passage Generator. The researcher explained how to complete the Maze Passage Generator Assessment for approximately five minutes. Then the students were given two and a half minutes to read the level five passage and choose the correct word out of three choices to complete the sentence. Next, the researcher asked students to use the remaining class period to read finish the social studies textbook section they had been given and determine the type of text structure using their chart. The last two minutes of class the classroom teacher reminded students of the importance

of using this strategy when they read expository text to help them comprehend the text (see Table 5).

Table 5

Intervention Schedule Week 8

Day of the Week	Time Length	Activity
Monday	Twenty Five Minutes	<ul style="list-style-type: none"> • Testing of QRI-5 with individual students • Other students Reader's Theater
Wednesday	Twenty Five Minutes	<ul style="list-style-type: none"> • Testing of QRI-5 with individual students • Other students Reader's Theater
Friday	Twenty Five Minutes	<ul style="list-style-type: none"> • Testing of QRI-5 with individual students • Other students Reader's Theater

Collection of Data

The data for this study was collected in two different ways. First, the classroom teacher administered the QRI-5 (Leslie & Caldwell, 2011) to the students to determine their instructional reading level. The classroom teacher began by assessing the student's word recognition skills through the word list to determine the student's instructional reading level. Then the classroom teacher used the level gained from the word list to administer the student's instructional reading level test. The teacher then analyzed the results of this test to determine what specific interventions each student needed to work on. This test was also used as a posttest to determine

progress made throughout the research study. The results were scored using the QRI-5 guidelines.

The second piece of data was collected through teacher observations and notes as well as Maze Passage Generator Assessments on a bi-weekly basis. Notes were recorded after each intervention block to help monitor progress of each individual student. These notes were necessary to determine when to move on to the next intervention strategy and also to determine which students had mastered the strategy that was taught. The Maze Passage Generator Assessments were administered at the beginning of the class period on a bi-weekly basis to determine the student's comprehension progress.

Summary

The participants in this study were taught specific reading strategies that were designed to help students improve their reading comprehension during an intervention block. Students learned interventions such as word recognition strategies, narrative story structure, and expository text structure. The classroom teacher then monitored each student's individual comprehension progress by using the QRI-5 as a pre and post assessment as well as progress monitored student progress using the Maze Passage Generator. The next chapter will analyze and interpret the results from this study.

CHAPTER FOUR: RESULTS

The purpose of this study was to determine if the implementation of intervention for struggling fifth grade readers would be effective in helping improve the students' overall comprehension. Literacy interventions implemented with fidelity for struggling readers can help close the achievement gap (Neddenriep et al., 2010). Consequently, a number of studies have been completed to determine the effectiveness of implementing literacy intervention for struggling readers (Bailet et al., 2011; Begney, 2011; Kim et al., 2009; Lang et al. 2009; Neddenriep et al., 2010; O'Connor et al., 2007; Rogevich et al., 2008; Vernon-Fegans et al., 2012; Vaughn et al., 2010). This chapter details the findings of the current study conducted over eight weeks. The results are detailed with narrative and visual examples.

Data Collection

Five fifth grade students participated in this study. All of the participants attended a middle school that served fifth through eighth grades located in the Midwest. The sample population in the study was composed of five Caucasian children, between the ages of ten and eleven. Four of the students in the sample population were male and one was female. One of the students had an individualized education plan (IEP); however, the student did not receive services for reading.

A pre-assessment was administered to each participant to determine the students' prior knowledge. The Qualitative Reading Inventory-5 (Leslie & Caldwell, 2011) reading passages and comprehension questions were used as the pre-assessment. When administering the assessment, students were provided a word list to determine which level reading passage level the students would be assessed. Once the passage level was determined, students were instructed to read that level passage orally while the researcher recorded miscues and measured fluency.

After the student finished reading the passage orally, the researcher asked the student to retell the passage and she noted the components that the student remembered. Next, the researcher asked the student eight comprehension questions, four literal and four inferential, and recorded student's answers. A response was considered correct if it matched the answer that was indicated in the QRI-5 manual. This protocol was continued until the student reached their frustration reading level, which was indicated by the student answering five or less comprehension questions correctly. The level passage was determined to be at the instructional level if the student answered six or seven comprehension questions correctly, and the passage was considered at the independent level if the student answered eight comprehension questions correctly.

The pre-assessment results were used to create a plan of intervention for students. From the pre-assessment results, it was concluded that students would benefit from word recognition strategies, narrative story structure, and expository text structure interventions to improve comprehension. These were determined to be areas for improvement as many students answered comprehension questions incorrectly because they were unable to determine the different components of the story. Additionally, students did not have strategies to determine what unknown words were when reading the passage out loud, thus it was determined the students would benefit from word recognition strategies. Intervention lessons were designed based on the results and were taught on an alternate day basis during a twenty-five minute block. The lessons were implemented for six weeks.

For the first two weeks of study, students were introduced to word recognition strategies. The researcher began each word recognition lesson by modeling the lesson and then the researcher scaffolded assistance for the students. The next two weeks of the study, students were

introduced to narrative story structure. The researcher modeled how to use a graphic organizer to help identify the components to a narrative story structure. Next, the students practiced using the graphic organizer in partnerships while the researcher offered feedback and assistance. In the final two weeks of the study, the researcher introduced expository text structure. The researcher modeled using a text structure chart to help students identify the different types of text structure in the students' social studies textbook. Next, the researcher scaffolded assistance and offered feedback while the students worked in partnerships.

To track student growth throughout the study, Maze Generator Passage Assessments (Intervention Central, 2012) were utilized. The assessments occurred bi-weekly throughout the six weeks of instruction. At the beginning of the intervention block on the day the progress monitoring would occur, the researcher set a timer for two and a half minutes and then explained the directions for how to complete the assessment. The researcher informed the students that they would read a grade five passage and while they read the passage they would encounter parentheses with three word choices. The students were instructed to circle the word that best completed the sentence. Once the students understood how to complete the assessment, the researcher distributed the Maze Passage and the students were provided two and a half minutes to complete as much of the reading as possible. After the assessment was completed, the researcher collected the assessment and scored them to note student growth. To ensure consistency, the same Maze Passage was administered to all students. The passages were scored by analyzing whether or not the student chose the correct word to complete the sentence. If a student chose three incorrect answers in a row, the passage was no longer scored. The student was considered to be reading at an instructional level of grade five when they correctly identified 25 words in two and a half minutes.

In addition to the progress monitoring that occurred, a post assessment, using the Qualitative Reading Inventory-5 comprehension questions and passages, was administered to all students after the six-week implementation ended. The level of text the students were provided was based on the level that the students had been assigned for their pre-assessment. For example, if a student completed a level four passage for their pre-assessment, they were presented with a level four passage for their post assessment. The student would continue moving to a higher-level passage if they demonstrated that they the current level passage was instructional or independent. If the current level passage was considered to be at the frustration level, indicated by the student correctly answering five or less comprehension questions, then errors were noted and the assessment process was complete.

Analysis of Data

The first week of the study was used for pre assessment. To assess where the students were prior to the intervention, the QRI-5 was administered as a pre assessment (see Figure 1). JL13 was considered at the frustration level when she read a level three passage and correctly answered two comprehension questions correctly. EE13 reached the frustration level when he read a level two passage and answered two comprehension questions correctly. JM13 reached the frustration level when he read the level four passage and correctly answered three comprehension questions correctly. AW13 reached the frustration level when he read a level four passage and answered four comprehension questions correctly. CZ13 was considered at the frustration level when he read the level three passage and answered one question correctly (see Figure 1). The mean comprehension score for students was 2.4 questions answered correctly.

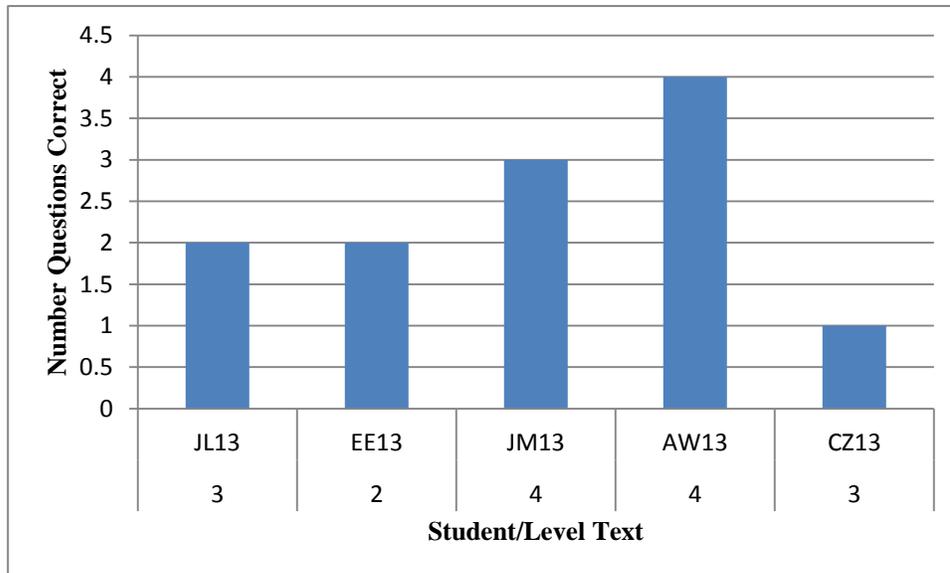


Figure 1. Pretest Number of QRI-5 questions answered correctly by the participants.

All students completed the progress monitoring probes three times throughout the study. Based on progress monitoring probes, all students' scores increased as their time in intervention continued (see Figure 2). JL13 correctly chose nine words correctly during week three, ten words correctly during week five, and 15 words correctly during week seven. EE13 correctly chose seven words correctly during week three, nine words correctly during week five, and 12 words correctly during week seven. JM13 correctly chose eight words correctly during week three, 18 words correctly during week five, and 21 words correctly during week seven. AW13 correctly chose eight words correctly during week three, 19 words correctly during week five, and 25 words correctly during week seven. CZ13 correctly chose five words correctly during week three, ten words correctly during week five, and 12 words correctly during week seven. The mean score for week three progress monitoring was 7.2 words, the mean score for week five progress monitoring was 13, and the mean score for week seven was 16.8. To be considered at grade level using the Maze Passage Generator Assessment students needed to correctly identify 25 words.

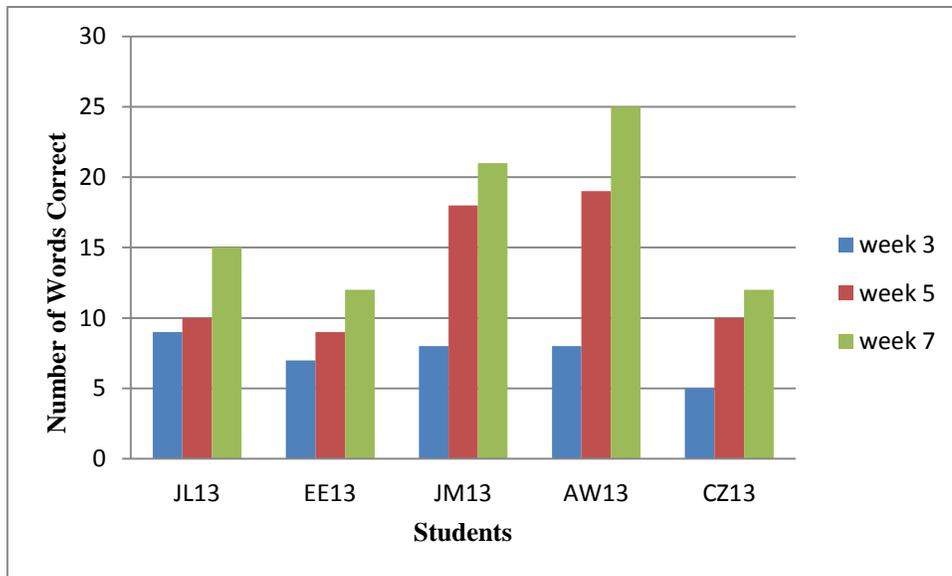


Figure 2. Progress Monitoring by week based on Maze Passage Generator Assessment.

After interventions were implemented for six weeks, a post assessment (QRI-5) was administered. The students completed the assessment process until they reached the frustration level as demonstrated by answering five or more questions incorrectly. From this point, the researcher was able to determine the students' independent reading level based on the passage in which the student was able to answer eight comprehension questions correctly. The instructional level was determined by the level passage in which the student was able to answer six or seven comprehension questions correctly. JL13 was considered at the frustration level when she read a level five passage and correctly answered three comprehension questions correctly. She demonstrated that she was independent at a level four text by answering the eight comprehension questions correctly. Additionally, she was also independent at a level three text, which is where she had previously been at a frustration level during the pretest. EE13 was considered at a level of frustration when he read a level five passage and answered two comprehension questions correctly. He demonstrated an instructional level at the level four passage by answering seven questions correctly. Additionally, he was also independent at a level two text, which is where he

had previously been at a frustration level during the pretest. JM13 obtained a level of frustration when he read the level six passage and correctly answered four comprehension questions correctly. He demonstrated an independent level at level five when he answered eight comprehension questions correctly. Furthermore, he was also independent at a level two text, which is where he had obtained a frustration level during the pretest. AW13 was at a level of frustration when he read a level six passage and answered three comprehension questions correctly. He demonstrated independence at level five when he answered eight comprehension questions correctly. Moreover, he was also independent at a level four text, which is where he had reached a frustration level during the pretest. CZ13 was considered at a level of frustration when he read the level five passage and answered two questions correctly. He demonstrated an instructional level at the level three passage when he answered seven questions correctly. In addition, he was also independent at a level three text, which is where he had previously been at a frustration level during the pre-assessment.

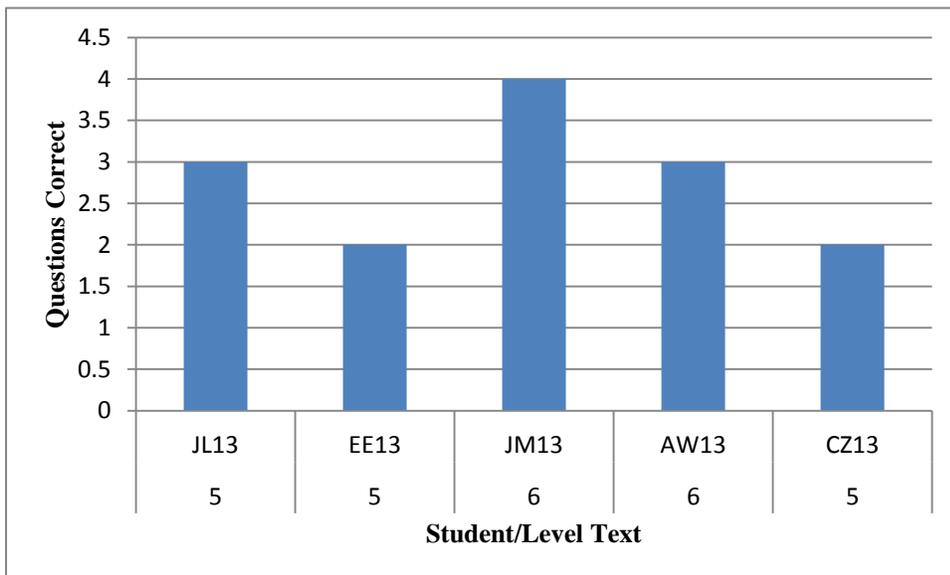


Figure 3. Posttest Number of QRI-5 questions answered correctly by the participants.

Post-Assessment data depicted in Figure four illustrates the number of questions correct in pre and post assessments using the Qualitative Reading Inventory-5 at the students' starting level. For example, if a student initially was at a level of frustration at the level five passage at the beginning of the study, the growth on this same level is demonstrated in Figure four. Overall results indicated positive gains in comprehension for all students. JL13 demonstrated growth on a level three passage as she reached a frustration level in the pretest with two questions correct and an independent level on the posttest with eight questions correct. EE13 made positive gains on a level three passage as he reached a frustration level in the pretest with two questions correct and an independent level on the posttest with eight questions correct. On a level four passage JM13 demonstrated growth as he had been considered at a frustration level in the pretest with three questions correct and an independent level on the posttest with eight questions correct. AW13 made encouraging gains when he demonstrated growth on a level four passage. He had obtained a level of frustration on the level four passage in the pretest with four questions correct and made gains to an independent level on the posttest with eight questions correct. On a level three passage CZ13 made promising growth. During the pretest at a level three passage, CZ13 demonstrated a level of frustration with one question correct and on the posttest he obtained an independent level with eight questions correct. A *t* test was completed to compare overall scores from the pre to post-assessments to indicate if there was a statistically significant difference in results. There was a significant effect of $t(65) = 6.53, p < .001$ from the pretest to posttest results. Therefore, positive gains in comprehension can be attributed to the implementation of reading intervention.

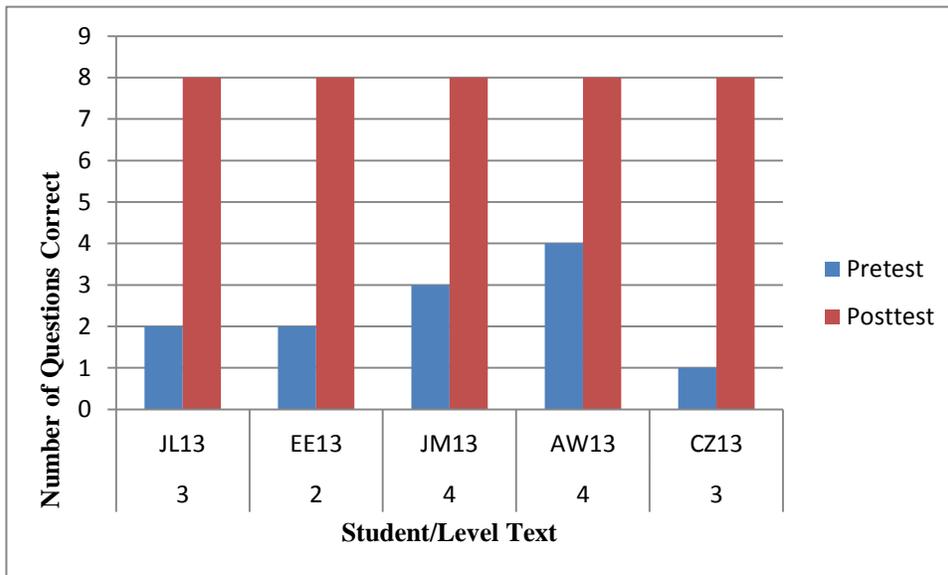


Figure 4. Pretest to Posttest Comprehension Questions on the QRI-5 using same level passage.

Conclusion

Implementing literacy intervention on a consistent basis will help struggling readers improve their comprehension (Kim et al., 2009; Lang et al. 2009; O'Connor et al., 2007). This chapter detailed the findings of research conducted comparing pre and post assessment results after the literacy intervention was implemented. This study also extended previous research regarding the implementation of intervention for struggling readers. The purpose of this study was to determine if the implementation of intervention for struggling fifth grade readers would be effective in helping improve their overall comprehension. Overall results of the study indicated that the implementation of a literacy intervention was effective for struggling readers in helping the students improve their overall comprehension. In the next chapter the results of this study will be analyzed and interpreted as well as indicate next steps for future studies.

CHAPTER FIVE: CONCLUSIONS

To improve the reading skills of struggling readers, research based interventions need to be implemented (Kim et al., 2009). Various studies have been conducted regarding the implementation of intervention which has demonstrated that the implementation of intervention has improved a student's overall comprehension if done with fidelity (Kim et al., 2009; Lang et al. 2009; O'Connor et al., 2007; Rogevich et al., 2008; Vaughn et al., 2010,. If students are not meeting grade level benchmarks for literacy, then interventions need to be implemented to ensure academic success throughout their educational career (Rogevich et al., 2008). This chapter synthesizes the results of previously conducted research regarding the implementation of reading intervention for struggling readers as well as the results of the current study to address the significant question of this action research: Does the implementation of reading intervention for struggling readers improve the students' overall comprehension? Included within this chapter are the strengths and limitations of the current research study, instructional implications linked to Common Core Standards, and recommendations for future research.

Review of Rationale and Connections to Research

The interventions that were implemented in this study, narrative story structure, expository text structure, and word recognition strategies, were chosen based on the student's pre-assessment needs. Similar to a study conducted by Van Keer (2004) determined that explicitly instructing reading strategies was a useful tool to increase fifth graders' reading comprehension. Earlier research has demonstrated that student focused intervention implemented with struggling readers will contribute to their overall comprehension success (Kim et al., 2009; Lang et al. 2009; O'Connor et al., 2007; Vaughn et al., 2010, Rogevich et al., 2008). Previous research has also determined that when reading interventions are conducted with

fidelity and on a consistent basis, students reading abilities increase dramatically which contributes to closing the achievement gap (Bailet et al., 2011; Begney, 2011; Neddenriep et al., 2010; Vernon-Fegans et al., 2012). Similar to a study conducted by Begney (2011), this study confirmed that struggling readers benefit from the implementation of a consistent intervention to continue practicing their reading skills. Comparable to a study completed by Vernon-Fegans et al. (2012), using the classroom teacher to provide this intervention proved to be an effective way to reach struggling readers as the students were already comfortable with this person.

In addition, Response to Intervention (RTI) has provided a framework for school-wide models in addressing students' struggles and then assisting schools in determining whether additional interventions are needed (Wanzek, et al., 2011). This framework fit well with the new schedule that was implemented at the middle school level where the researcher was employed. The framework provided for a twenty-five minute intervention block for struggling readers that was the basis of this study.

In addition to previously completed studies, the importance of comprehension skills to a students' overall reading ability has been specifically presented in the Common Core State Standards (2010) which specify that all children, by the end of the school year, should be able to read and comprehend grade level text. Furthermore, each grade level has additional specific skills that each student should be able to accomplish in regards to reading. These skills contribute to a student's ability to comprehend text. For example, a student in fifth grade needs to be able to quote accurately from the text to support an inference that they create while reading. The ability to meet this standard is a key implication that students are able to read grade level text, thus comprehending what they have read. Additional literacy skills that students should be able to demonstrate at grade five include, being able to determine a theme from text, the ability

to compare and contrast story elements, determining the main idea of text, determining the meaning of unknown words, and analyzing the structure and craft of text. When students do not meet the Common Core Standards through high quality classroom instruction, implementing a consistent intervention can aid in improving the students' specific area of need. The state of Wisconsin adapted the Common Core Standards which requires that students achieve these skills and teachers be held accountable to help students accomplish them. When students are not accomplishing these standards in the classroom, implementing interventions has helped close the achievement gap (Begeny, 2011).

Review of Study Implementation

The current study implemented literacy intervention to assist five students who were identified as having reading difficulties to improve their overall reading comprehension. The participants in this study included four boys and one girl with a mean age of 10.6 years old. All participants were Caucasian and participated in the literacy intervention for the eight weeks the study was implemented.

A pre assessment was administered to assess comprehension knowledge using the Qualitative Reading Inventory-5 (2011). Results of the pre-assessment were used to create intervention lessons for the students. The QRI-5 is an assessment that requires students to read leveled passages and answer questions designed to test the students' comprehension. Based on the results of this assessment, it was determined that students would benefit from instruction on word recognition strategies because student responses to the pre-assessment demonstrated a lack of knowledge in decoding words. Additionally, narrative story structure and expository text structure were determined as areas in need of intervention due to the students' inability to outline

story features from the passage and identify key components of the story as demonstrated through their answers to the comprehension questions.

Progress throughout the intervention was tracked using the Maze Generator Passages (2012) that measured the students' comprehension progress. The Maze Generator Passages required students to read a level five text and determine which word best completed the sentence, from three possible word choices, in two and a half minutes. Finally, the Qualitative Reading Inventory-5 (2011) was administered again as a posttest to determine if progress had been achieved from the implementation of this literacy intervention.

Results

Results of the current research confirmed results of similar research conducted regarding implementation of reading intervention on a student's comprehension (Kim et al., 2009; Lang et al. 2009; O'Connor et al., 2007; Vaughn et al., 2010, Rogevich et al., 2008). When the current study was initiated, all students completed a pretest using the QRI-5 during the first week of the study. On this pre-assessment, students demonstrated their frustration level by answering five or less questions correctly. One student reached a level of frustration on a level two passage, two students reached a frustration level at a level three passage, and two students reached a frustration level at a level four passage. This data demonstrated that all students were reading below grade level. Additionally, results indicated an inability to identify story elements and use word recognition strategies, which demonstrated that these would be areas to strengthen through the intervention. This information was used to create intervention lessons specific to the student needs and provide students with appropriate level text to read.

During the six week implementation of the study, students' progress was monitored using the Maze Passage Generator Assessment. To be considered at grade level (fifth grade) using the Maze Passage Generator Assessment, students need to correctly identify 25 words. The mean score for all students during week three was 7.2 words, which demonstrated a significant gap between the 25 words students should be able to identify in two and a half minutes and how they actually performed on this assessment. Two more weeks of instruction were implemented and students were tested again. For week five the mean score was 13 words correctly identified. This demonstrated that students had made growth from the intervention, but that they still were not reading at grade level. A final progress monitoring assessment was given at week seven which had a mean score of 16.8 words correctly recognized. While still not reading at grade level, students demonstrated growth in the amount of words they could correctly identify. These results can also be attributed to students being more focused on their progress, as all students were highly motivated to outperform their previous scores. While student motivation was not assessed in this study, students demonstrated an increase in engagement and motivation through self-monitoring of their progress using this assessment.

Results from the post-test that was administered at week eight, indicated positive gains for all students. The students completed the post-assessment process, using the QRI-5, until they reached the frustration level as demonstrated by answering five or more questions incorrectly. Using this assessment, students were considered at their instructional level when they were able to answer six or seven comprehension questions correctly and at their independent level when the students were able to answer eight comprehension questions correctly.

All students made positive gains as demonstrated by the QRI-5 pre and posttests. For example, one student who had demonstrated a level of frustration with a level three passage prior

to the implementation of intervention was able to independently read this level passage after the intervention was completed. Additionally, this same student also demonstrated an independent level with a level four passage by answering eight comprehension questions correctly. Another student who had validated a level of frustration at a level two passage prior to the implementation of intervention revealed an ability to independently comprehend that same text after the intervention was complete. This student also demonstrated the ability to read at an instructional level five passage by answering seven comprehension questions correctly. The next student had demonstrated a level of frustration at a level four passage prior to the implementation of intervention. Furthermore this same student revealed an independent level with a level five passage by answering eight comprehension questions correctly. Another student who had verified a level of frustration at a level four passage prior to the implementation of intervention was able to independently comprehend this same text after the intervention. This student also was at an independent level with a level five passage by answering eight comprehension questions correctly. The last student also improved his comprehension by demonstrating an instructional level when reading a level three passage after the implementation of intervention, which had previously been considered a level of frustration text. Based on the post-test results, all students did demonstrate growth from the implementation of intervention. Students demonstrated this growth by being able to correctly answer comprehension questions related to the level text that they read. In analyzing the students' answers to these questions, it was determined that all students improved their ability to identify story elements. This growth can be attributed to the implementation of intervention that focused on this specific area of concern.

One possible explanation for students improving, but not yet meeting grade level expectations may be a result of influences outside of the researcher's control. For example,

attendance was one variable that may have had an impact on outcomes. The student that experienced the least amount of growth had a higher number of absences than the other students who never missed a session. Specifically, CZ13 missed three sessions, which accounted for 20 percent of the intervention instruction. While this student still made positive gains, he only improved from one question correct to seven questions correct. Conversely, his peers who did not miss any sessions made more significant gains. Overall, the highest achievement gains were observed in students who were present for each intervention lesson. An additional reason that students may not have met the grade level benchmark yet may be the inability to provide intervention on a daily basis. The middle school schedule allows for implementation of intervention on an every other day basis, which may contribute to students not retaining all strategies taught. The outcomes of the present study were consistent with previous findings that suggested the implementation of intervention for struggling readers improves the students' overall comprehension (O'Connor et al., 2007; Vaughn et al., 2010).

Strengths and Limitations

This study attempted to determine if the implementation of an intervention for struggling readers would contribute to their overall reading comprehension, though this study, similar to ones done in the past, did have strengths and limitations. One significant strength of this study was the consistency in which the intervention block was implemented. A previously conducted study by Kim et al. (2009), which was mentioned in Chapter Two, struggled to have consistency of implementation due to reasons outside of the researcher's control. Due to the strategic change of the schedule in the district where the current study was conducted, intervention was implemented at the same time on an every other day basis consistently. With a consistent

implementation, the interventions have greater chance for transferring to the students' overall comprehension.

As with previous studies, this research also had several limitations. First, there was not a large sample size, due to the small class sizes desired to meet with students on a more individualized basis. While all participants demonstrated improvement in their comprehension, there was not a large enough sample size to generalize the improvement to the implementation of intervention.

Finally, results were limited by the short duration of the study. The entire study occurred during a time span of eight weeks, with just six weeks being used for implementation of intervention, the other two weeks being used for assessment. During these six weeks, students participated in a consistent intervention every other day for a total of 15 intervention blocks that occurred for 25 minutes at a time. For a more accurate account of student growth, a study taking place over a longer period of time to show more significant growth would be stronger.

Future Research

Currently, a large body of research exists regarding the implementation of reading intervention for elementary students. However, more research needs to be completed regarding the implementation of reading intervention for secondary students. The results of this study revealed that the implementation of reading intervention on a consistent basis has improved the participants' overall comprehension. Additional research needs to be conducted on a consistent basis with a larger sample size to demonstrate whether the implementation of intervention has a direct effect on comprehension. With the recent focus on Response to Intervention, the

implementation of intervention will become more prominent and it will be important to know if this intervention has a positive impact on comprehension gains.

Additionally, it would be beneficial to examine whether or not the procedures that are followed for the implementation of intervention have an effect of overall comprehension gains. For example, research should be completed to determine if student comprehension improves more significantly if students follow the same protocol each day with intervention for a longer period of time. It would be beneficial to know if these components influence the effectiveness of the intervention.

Conclusion

To increase student comprehension for students who are struggling, educators must pinpoint and implement interventions that address these reading difficulties among the students (Kim et al., 2009). Failure to implement these interventions will result in placing readers at risk for more significant reading struggles (Vernon-Feagons, et al., 2012). The current study concluded that the implementation of intervention will contribute to the improvement of reading abilities for underachieving students.

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