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Repeated reading for students with special needs

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REPEATED READING FOR STUDENTS WITH SPECIAL NEEDS

by
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Dedication

To my late mother, who taught me to love learning, teaching, children, and God.

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First, I would like to thank the parents of my students who were involved in this research study for allowing me the opportunity to complete my thesis project with your child. All the participants were wonderful and I could not have done this without them!

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To my dear and wonderful husband Nate. You encouraged me each step of the way. For this, I sincerely thank you. Life is just easier when you are married to your best friend.

Finally, I would like to acknowledge my Creator, "for the Lord gives wisdom, from His mouth come knowledge and understanding." Proverbs 2:6

Abstract

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This research study seeks to determine the effects of implementing variations of the repeated reading strategy with fourth and fifth graders with special needs when reading informational text. The purpose of this study was to teach students new techniques to improve word accuracy and comprehension and to better inform instruction. Four students in a multiple disabled self-contained classroom participated in this five week study. In addition to base-line data that was collected, data on timed repeated reading, paired repeated reading, listening-while-reading repeated reading, and vocabulary instruction prior to repeated reading was also analyzed. An interest inventory measured students' reading motivation prior to and after the study procedure. The results showed that vocabulary instruction prior to repeated reading yielded the greatest improvement in word accuracy and comprehension overall. However, reading-while-listening yielded the greatest improvement in answering inference-based questions. Timed repeated reading yielded the least growth in terms of word accuracy. According the interest inventory, student's interest in reading decreased as a result of implementing the repeated reading strategy. However, anecdotal notes taken during the study suggest otherwise. Overall, students' word accuracy and comprehension benefitted from the use of the repeated reading strategy.

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Chapter 1

Why Repeated Readings?

Robert was a lively, bright-eyed fourth grade student. Even though he was classified as communication impaired, his reading charmed audiences. One year, he earned the role of narrator of his class' annual Thanksgiving play. He read page after page with the intonation and prosody of an orator reading before royalty. After the play, another teacher asked Robert what his favorite part about Thanksgiving was. His large hazel eyes stared up blankly. "Thanksgiving? Don't you know this play was about the Pilgrims and Indians?"

Michael threw the petite frame of his ten year old body against his chair. He raked his hands through his hot red hair. The lines of frustration were etched around his eyes. The word was *once*. As in *Once upon a time* from a story Michael knew well. In fact, despite being classified as multiply disabled, he could retell the tale detail by detail, describe character's motivations, and discuss the battle between good and evil that contributed to the moral of the story. If only he could get past the first line.

These vignettes appear to describe problems from opposite poles of the reading spectrum that teachers of struggling readers or student with disabilities face. While Robert was able to read a historical recount of a beloved holiday beautifully, Michael struggled to read the first line of his favorite story. In contrast, when read to, Michael could show a greater depth of understanding, while Robert could barely answer a simple question.

Samuels (1976, p. 323) describes the reading struggle of these vignettes by stating that "in order to have both fluent reading and good comprehension, the student must be brought beyond accuracy to automaticity in decoding." Samuels (1976) defined automaticity as behavior that can be performed without attention. LaBerge (as cited in Samuels, 1976) described a lack of automaticity when engaging in two tasks at unskilled stages that cannot be performed simultaneously.

Understanding Samuel's (1976) concept of automaticity explains multiple reading phenomena. In the first vignette, Robert was able to read every word on the page, but was unable to recall what was read. Though it appears that Robert has automaticity in terms of decoding, Samuels (1976) describes two different scenarios which may have prevented Robert from comprehending what he read. First, Robert may be decoding automatically, but instead of using attention to process meaning, his attention was directed elsewhere, possibly on situations entirely separate from the reading at hand. Or, Robert may be "word calling". This implies that while Robert may sound like a fluent reader, decoding is still consuming a large amount of Robert's attention, leaving little attention to create meaning from what he has read. On the contrary, Michael's struggle with automaticity led to a lack of fluency, not comprehension as was the case with Robert. Michael was able to use critical thinking to understand a text when it was read aloud to him; however, as a beginning reader is not automatic in decoding (Samuels, 1997). Therefore, much of his attention is spent on this aspect of reading.

1.1 Purpose Statement

Understanding Samuel's (1997) automaticity theory gives perspective regarding the difficulties of struggling readers to decoding and comprehending text. However, this

understanding is futile without a plan of action to address the problems that are recognized. Therefore, Samuel's (1997) strategy for remediation is repeated readings. This "deceptively simple yet powerful technique" (Dowhower as cited in Samuels, 1997, p. 376) is used to increase word recognition, fluency, and comprehension. Repeated readings are intended to be a supplement to an already established reading program and especially suitable for students with special learning problems (Samuels, 1997).

From working with students like Robert and Michael, the research problem this thesis intends to address is how repeated readings affect the fluency, comprehension, and motivation of elementary age students with special learning needs when reading informational text. This study's purpose is to explore the benefits of developing the practice of repeated reading for struggling readers and to inform classroom instruction with the intent of improving practice.

Research shows that students who are considered delayed learners need an increased number of exposures to words before automaticity is acquired (McCormick, 2011). Because of the nature of the repeated reading strategy, students are repeatedly exposed to meaningful text through choral reading, paired reading, and echo reading, making the technique especially suitable for this population. Ideally, the strategy is used with students who read at least on a first grade level and is implemented three to five times a week in ten to twenty minute sessions with passages that range from one hundred to two hundred words (Therrien & Kubina, 2006). Since Samuel's (1976) work, studies have been published which pair the repeated reading technique with delayed readers. This thesis highlights research completed by Staudt (2009) who uses fourth graders who read below grade level, O'Conner (2007) who studies second and fourth grade struggling

readers, and Lovitt (2001) whose study focuses on boys ages 8-12 that were categorized as learning disabled.

Chard (2002) outlines three components which create an effective reading program for students with special needs. These components are explicit modeling, corrective feedback after multiple opportunities to repeatedly read, and the establishment of performance criteria for increasing text difficulty. Several studies have been developed over the past quarter century which touch on one or more of these three guidelines. Rasinski's (1990) study demonstrates how explicit modeling can be used to improve fluency as students participate in listening-while-reading activities. Staudt's (2009) research exemplifies how corrective feedback and word study instruction after multiple opportunities to repeatedly read improves fluency in students of special needs. Lovitt's (2001) work is an example of establishing performance criteria for increasing text difficulty as students used repeated readings as a drill, or had the opportunity to skip levels when performance criteria is met.

According to Samuels (1976), the utilization of the repeated reading strategy results in improved fluency, comprehension, and motivation to read. Studies that have supported the assertion that repeated reading improves in fluency include Staudt's (2009) and Rasinski's (1990) work. Staudt's (2009) work shows improved fluency through word work and corrective feedback which leads to an increase in words read per minute. Rasinski's (1990) research suggests improving fluency by using listening-while-reading to model fluency and repeated readings. Studies by O'Shea (1985) and O'Conner (2007) demonstrate ways that repeated readings can be used to improve comprehension. In O'Shea's (1995) study the effects of being cued to read for comprehension versus

accuracy are studied. The results show that students are able to recall greater detail from a text when cued to read for comprehension than accuracy. However, comprehension also improves when cued to read for accuracy. O'Conner's (2007) study compares continuous reading with repeated reading. The results show that either practice will improve comprehension more than the absence of these practices. Finally, Lovitt's (2001) and Flippo's (2014) study demonstrate how repeated readings can be used to increase student's motivation to read. Lovitt's (2001) study demonstrates how the use of repeated reading motivates students to read by using the strategy as a negative reinforcer. In this case, repeated readings are used as an activity to be avoided for remedial practice. On the contrary, Flippo's (2014) study uses repeated readings as a positive reinforcer as students are motivated to read because of the success they experienced while reading using this strategy in the past.

Samuels (1997) intends repeated readings to be used with brief meaningful chunks of text. In Staudt's (2009) study, poetry is used. In Rasinski's (1990), O'Shea's (1985), and O' Conner's (2007) study, fictional text is used. In Flippo's (2014) and Lovitt's (2001) study, leveled text from the established reading curriculum is used. The Common Core State Standards (http://www.corestandards.org/other-resources/key-shifts-in-english-language-arts/) recently placed an emphasis on increasing the amount of information text read. Therefore, informational text is used in this study.

1.2 Statement of Research Problem and Question

This teacher research study looks at the effects of using the repeated reading strategy with fourth and fifth grade students with special needs. It is important that this research is done to address the comprehension and phonetic struggles that a student with

special needs face. By conducting this research study, students should learn techniques to become more effective readers, improving their comprehension and fluency.

1.3 Story of the Question

I have been a tutor or teacher of students with special needs since I was 19 years old and students like Robert and Michael are no strangers to my rooster. Reading has always presented one of the biggest academic challenges for my students. According to McCormick (2011, p. 15) this is the norm as "80%-90% of students in learning disabled programs are enrolled because of reading difficulties." Because reading permeates parts of every other subject and activity that takes place at school, it is imperative that this issue is addressed.

Most of my students read at least two grade levels below their peers. From working with this population, I determined that the learning deficit occurs in the comprehension or phonics components of reading. Therefore, out of the five components of reading, fluency was given the lowest priority. It almost seems to be optional, especially after having a student like Robert who reads beautifully but has very limited comprehension.

It was during summer clinic while listening to colleagues give a presentation on S.J. Samuels and the repeated reading strategy that I began to rethink the role of fluency in a special needs classroom. If comprehension and phonics can improve as a result of practicing fluency through the repeated reading strategy, maybe this was something I should pay attention to. Hearing about the studies that Rasinski (1990), O'Shea (1985), and Staudt (2009) conducted, which caused such dramatic improvement in reading, made

me wonder if I could repeat these practices and yield similar results. It is with this hopefulness for my own students that I decided to study the repeated reading strategy.

Most of the studies I found used poetry or fictional texts as repeated reading material. These genres are selected because of the meaningful messages, familiar vocabulary, and rhythmic language that are used. They also lend themselves to be reread as they are appealing to readers and listeners. Because of this I did not find research that incorporated the repeated reading strategy with informational text. Knowing fourth and fifth grade curriculum and the demands for students to be exposed to more information text at this level, I decided it would be worth trying to use the repeated reading strategy in this genre.

1.4 Organization of the Paper

Chapter two of this thesis is comprised of a literature review. The literature review describes past research on the automatic-information processing model and repeated readings model as it pertains to this study. The methodology of the study is described in Chapter three. Also in Chapter three is the context of the study, description of the data sources used, and a description of how the data will be analyzed. The analysis of the data is addressed in Chapter four. Finally, Chapter five contains the results of the data, the conclusion, and any implications.

Chapter 2

Literature Review

Teachers of students with disabilities recognize the extraordinary challenge of teaching struggling readers. While many remedial reading programs have been developed, there is no guaranteed, fool-proof formula that will work every time for every student. Often reading programs need to be modified to target specific areas of weaknesses in order to remediate the problem. One such modification is through the implementation of repeated readings. Chapter two presents a review of literature available on repeated readings.

The first section will summarize the research, impacts, and practice of repeated readings. It is followed by a discussion on the significance of using the repeated reading strategy with students of special needs and struggling readers. The third section will address the effects of repeated readings in terms of fluency. Next, studies which examine how repeated readings influence comprehension will be discussed. Finally, students' attitudes and motivation regarding reading as a result of repeated reading will be examined. These discussions are intended to create a platform for the research question of what happens when repeated reading is used when reading informational text for students with special needs in fourth and fifth grade.

2.1 What does research say about repeated readings and how are repeated readings implemented?

S. Jay Samuels (Samuels, 1976, 1979), who built his theory on the work of Huey (as cited in Samuels, 1976, Chard, 2002), concluded that the brain acts as a single channel processor. This means that when two stimulants are presented concurrently, the

brain cannot devote full attention to each stimulant. This is demonstrated through a person learning how to drive a car. All of the new driver's attention is focused on operating the vehicle and the road ahead of them. Engaging in other tasks such as holding conversations, adjusting the radio, or eating become challenging. Similarly, a person just learning to play a piano needs to focus all their attention on the notes and keys they are playing. They will have a very difficult time holding conversations or watching T.V. at the same time. However, over time and with practice, individuals can become more proficient at driving or playing piano. These tasks which once required undivided attention will become automatic (Samuels, 1976, 1979).

Likewise, when students begin to learn to read, their attention is focused on the decoding aspect of reading. They are consumed with identifying letters, letter sounds, and articulating the sounds they see to form words (Samuels, 1976, 1979). As a result, little attention is given to developing meaning from the text. However, with practice, fluency is developed. Students are able to automatically identify words, leaving more attention to the comprehension of text. Samuels (1976, 1979) used the term automatic information processing to describe this phenomenon. Samuels relates this process to a surgeon learning to sew stitches or an athlete perfecting a skill. In all of these cases, the desired behavior is laborious in the beginning. However, with repetition the motions which perform the behavior become more fluent and eventually are something that can be automatically completed with little attention to the process of completing it.

Repeated readings are designed to be the model for Samuels' (1976, 1979) automatic information processing theory. This model is intended to be a supplement to complement reading programs and is not a program in and of itself. Repeated readings

were initially intended for poor readers and students with special learning needs; however, they have been found to be beneficial for average and above average readers as well (Therrien, 2006). Because the repeated reading strategy emphasizes accuracy and speed, Moyer (1982) describes the automatic information processing theory as a "bottom-up" approach to reading. Bottom-up is a term used to describe the reading process as beginning with phonics and comprehension developing as a result of proficiency in decoding.

Therrien (2006) outlines the components of repeated reading and creates a framework for setting up and using the strategy. First, teachers recognize that repeated readings should not be used with students who read below a first grade level. These students have not yet acquired the foundational skills they need to be able to read a text fluently. Instead, the ideal range is students who read between a first and third grade level. The strategy can be used with non-disabled students, students with learning disabilities, high-functioning students with autism, and students with low vision. The intervention can be effective when used 3-5 times per week for 10 to 20 minute sessions. The session should begin with the tutee reading a passage between 100 and 200 words to a well trained tutor. The tutor should then offer corrective feedback on word errors and performance. If the tutee makes a meaning maintaining mistake, feedback can be given when reading is complete, but before the next reading begins. If a student mispronounces a word or hesitates for more than three seconds, feedback on the correct pronunciation of the word should be offered immediately. The same process should continue until the tutee has reached a specified goal of reading a determined number of words making a set

number of errors in a set amount of time. Tutees should be able to acquire their goal after rereading a passage up to 4 times.

Moyer (1982) has outlined studies which have used the repeated reading strategy. In all of these studies, it is noted that the number of errors decreased as speed increased with each consecutive read. Moyer also notes that student's confidence and motivation increase with practice in repeated readings. The subsequent sections will address why the repeated reading strategy is crucial for students with special needs and struggling readers. Following this, a discussion on the effects of repeated readings in terms of fluency, comprehension, and motivation will ensue.

2.2 Why use repeated reading for students with special needs and below average readers?

Disabled, or delayed, readers are described as "individuals who have difficulty learning to read despite adequate intelligence and adequate instruction." (McCormick, 2011, p. 14). According to the discrepancy model, this is someone who reads significantly below their potential. 80%-90% of students who are considered learning disabled are classified as so because of reading difficulties (McCormick, 2011).

In terms of sight words, McCormick (2011) states that students who have average intelligence require 35 exposures of a word before the word is considered automatic, giving way to fluency. Slow learners require 40 exposures, upper educable students with an IQ range of 70-79 require 45 exposures, and middle educable students with an IQ range of 60-69 require a minimum of 55 exposures to a word. Considering this, an essential factor in designing a research based reading program for students of special needs and struggling readers is the use of repetition. It is important to clarify that in this

context; the strategy of providing repetition is not intended to be a drill. Instead, repetition should be provided through meaningful, connected readings of a variety of texts for the purpose of over learning (McCormick, 2011). After understanding the implication of learning to read for students with special needs, consider what the repeated reading strategy has to offer. Using the repeated reading strategy, students have the opportunity to reread text in a meaningful way, increasing their exposure to sight words and vocabulary. McCormick (2011, p. 257) further suggests that "reading the same passage allows opportunity to glean ideas that might be missed in a single read. Students gain from the experience of more complete comprehension." This implies that not only will repeated readings improve word identification and fluency, but it also has the potential to improve comprehension.

Chard (2002) compiled a synthesis of research on effective reading interventions for elementary age students with learning disabilities. His findings suggested that effective interventions included explicit modeling of fluent reading, multiple opportunities to repeatedly read familiar text with corrective feedback and independently, and the establishment of performance criteria for increasing text difficulty.

In the following sections, studies by Staudt (2009), O'Connor (2007), and Lovitt (2001) will highlight the use of repeated reading in terms of fluency, comprehension, and motivation, respectively, with students who require reading intervention. In accordance with Chard's (2002) research, Staudt's (2009) study is an example of the effects of offering corrective feedback and word study instruction in correlation with the repeated reading exercise and Lovitt's (1976) research is an exemplar of establishing performance

criteria for increasing text difficulty. Rasinksi's (1990) study will address explicit modeling through listen-while-reading to develop fluency.

2.3 What effect does repeated reading have on fluency?

Fluency is recognized as one of the five essential components of reading by Reading First (McCormick, 2011). It is defined as being able to read quickly, accurately, and with great expression by the National Reading Panel (Chard, 2002). In addition, fluency is a component that is addressed through the repeated reading strategy (Samuels, 1979).

One study tested the use of word accuracy to measure fluency in repeated reading with a fluent oral model versus using repeated reading without a model. This study by Rasinski (1990) used third graders of varying reading abilities. Participants completed a pre-test, then either engaged in repeated reading for two days or repeated listening for two days. After this, a post-test was given measuring students accuracy when reading. The procedure was then repeated alternating the students who participated in repeated reading and repeated listening. Rasinski (1990) found no significant difference between repeated readings and repeated listening in terms of student's ability to read quickly or accurately. This suggests that in regards to fluency, both strategies are beneficial and can be used simultaneously.

Another study by Staudt (2009) used two fourth grade students in a tutoring setting who had auditory processing difficulties, deficits in auditory and visual memory, auditory discrimination problems, an impaired executive function, and diagnosis of attention-deficit hyperactivity disorder. Staudt used a combination of repeated readings, corrective feedback, and intensive word study and vocabulary instruction when reading

poetry to improve fluency. Students used the repeated reading strategy on the same poem for an entire week. By the end of the study, Staudt (2009) noted that the participants were able to more accurately read nonsense and unknown words, making reading a less onerous task. However, despite the progress, it took an additional year of tutoring before progress was measureable on a standardized fluency assessment (Staudt, 2009).

2.4 What effect does repeated reading have on comprehension?

For most readers, fluency is a sign of comprehension (Samuels 1976). Unlike struggling readers who read word by word or phrase by phrase and pay little attention to punctuation, fluent readers are able to switch their attention from the syntax and graphophonics of a text and access meaning (Samuels, 1976).

O'Shea (1985) asked the question of what happens when third graders who read above grade level are cued to read for accuracy verses comprehension when engaging in repeated readings. This study resulted from the assumption that readers will automatically begin attending to comprehension once they have become familiar with the syntax and semantic text structure. Students engaged in repeated reading one, three, and seven times and were either cued to read for accuracy or comprehension. The results of this study showed that students who were cued for accuracy were able to read more accurately but were able to retell less of the story than students who were cued for comprehension. Likewise, students who were cued to read for comprehension were able to recall more details from the text, but read with less accuracy. However, the study also indicated that comprehension continuously improved for both students who were cued for accuracy and comprehension with each increased interval of repeated reading.

O'Conner (2007) wanted to see if repeated readings would lead to improved reading comprehension. This study tested repeated reading and continuous reading with second and fourth grade students who read below average. O'Conner (2007) refers to continuous reading as reading a wide range of text, as opposed to repeated reading where the same text is read over and over again. Participants used either continuously or repeated reading for fifteen minute sessions three times a week for fourteen weeks. A control group was also established to compare the results of the continuous and repeated reading groups. Data was collected on reading rate, word identification, and reading comprehension of sentences and passages prior to treatment, midway through treatment, and at the conclusion of the study. The results showed more improvements in continuous reading and repeated reading in participants' comprehension skills than the control group. Furthermore, the repeated reading group showed greater improvement in comprehension than the continuous reading group. In addition, these improvements in comprehension were accompanied by improvements in reading rate and word identification. Therefore, O'Conner (2007) concluded that regular repeated reading or continuous reading was beneficial for struggling readers to improve comprehension, reading rate, and word identification.

2.5 What effect does repeated reading have on motivation?

Motivation is recognized as a crucial variable in student achievement. Two aspects of motivation are whether or not a student expects to be successful and the value that is placed on a successful outcome (McCormick, 2011). The repeated reading strategy affords students the opportunity to be successful, encouraging them to expect success again in the future, as they experience increased reading rates and a deeper

understanding for what is read, placing value on the successful outcome. (Lovitt & Hansen, 2001)

A study involving repeated readings which credits motivation as an important contributing factor in student's reading success is by Lovitt and Hansen (2001). In this study, seven boys ages 8-12 who read one to three years below grade level read a passage from their instructional level. If the student met their criteria, being a 25% improvement on words correct per minute from their baseline reading and answered 90% of the comprehension questions accurately, the student was allowed to "skip" to a more challenging passage. If the student did not meet the criteria, he was required to complete repeated reading in a "drill" form until the criterion was met. The study noted significant improvement when comparing student's baseline rates to their reading rate at the completion of the study. In fact, on average students gained 1.9 grade levels in 15.7 weeks. The research noted that students understood that they read below the level of their peers and saw the opportunity to "skip" as a way to catch up. Therefore, this system was very reinforcing and motivating. Furthermore, some students saw the "drill" as punishment and worked hard to avoid it. Overall, the significance of the approach is that it was very individualized because students moved through text levels at their own pace, not being held back or pushed along by the group's progress (Lovitt & Hansen, 2001).

Contrary to Lovitt and Hansen's (2001) study where motivation to read occurred because repeated readings were seen as a punishment, Flippo's (2014) study discusses how repeated readings can be seen as a positive motivator. Flippo asked the question: How does repeated reading fluency practice at the third grade level affect motivation to read? Data was collected through a reading interest inventory and surveys documenting

student's attitudes towards reading at the beginning and end of the study. The study lasted six weeks and students participated in the Read Live reading program which has a strong fluency emphasis. The results of the study showed that the majority of the student (57%) indicated that they were more interested in reading inside and outside of the classroom as a result of experiencing success from using the repeated reading strategy in the Read Live program.

2.6 Conclusion

This literature review provided an overview of the repeated reading strategy by describing the automatic information processing theory and research based ways to implement the strategy. It also identified and defined students with special needs as learning disabled readers. Lastly, this review outlined three benefits in incorporating the repeated reading strategy into a classroom's curriculum. While fluency, comprehension, and motivation were discussed individually, it is important to note that these three factors are in fact interconnected and improvements can occur simultaneously.

In the following chapter, the methodology of this research study will be discussed. This will include a description of the data sources, context of the study, and procedures that will take place to answer the question of how fourth and fifth grade students with special needs will be effected by the repeated reading strategy.

Chapter 3

Methodology

According to Shagoury and Power (2012), research is the process of recognizing essential questions, gathering data, and analyzing it to draw conclusions. Research in some form has been conducted for as long as questions have been asked. The traditional mode of academic and educational research, which is most well known, may conjure images of agendas, combing through data bases, extensive funding, and tied interests. Shagoury and Power (2012, p. 3) refer to this research as research with a "big R". While this type of research may influence teacher evaluations, standardized tests, and other educational policies and laws, it rarely addresses the problems that puzzle classroom teachers from day to day. In contrast to research with a "big R", a different approach to research, referred to as research with a "little R", is designed to investigate the practical inquiries of teachers regarding their classroom everyday (Power & Shagoury, 2012, p3).

The primary purpose of conducting teacher research is to develop an understanding of students' learning and develop concrete ways to improve instruction. It is done in the classroom setting and the research and results are directly related to the students of the class. Teacher research falls under the umbrella of practitioner inquiry and is often done in collaboration with university-based colleagues and other educators (Cochran-Smith & Lytle, 2009). Teacher research involves collecting and analyzing data in a systematic way that can be presented to colleagues, parents, and administrators. In the end, the teacher researchers should have a transformed understanding of his or her students which results in more complete and dynamic instruction (Shagoury & Power, 2012).

Teacher research is usually conducted through qualitative research as opposed to quantitative research. Qualitative research emphasizes discovery and allows the generation of new questions while quantitative research tests hypotheses through more generalized samples of participants. Quantitative research also collects and presents data through statistics, measurements, and percentages. Qualitative research collects data through interviews, anecdotal notes, journals, surveys, and observations, and usually publishes findings in narrative form. In addition, this research is often completed in participants' natural setting, honoring established curriculum and expectations. Therefore, a teacher researcher's inquiry is one that directly relates to the effectiveness of one's own practice. Both types of research begin with an inquiry, are supported by a theory, and are methodically conducted. However, considering these differences, qualitative research better describes the expectations and procedures of teacher research.

Therefore, the research paradigm for this research study will be a qualitative teacher research study. This study seeks to understand what happens when the repeated reading model is used when students with disabilities read informational texts. The purpose of this study is to analyze the effectiveness of this strategy with this particular population using the specified genre. Essentially, through this study, students who are considered learning disabled will be equipped with techniques to become more efficient readers. Therefore, in addition to informing instruction, this study seeks to improve students' fluency and comprehension when reading informational text to proficiency.

3.1 Procedure of the Study

In the first week of the study, students completed an interest inventory. This helped determine students' attitude and motivation toward reading informational text prior to the study procedure. This information is important in establishing a baseline of interest. Motivation is seen as an important factor in students' success in reading; therefore, this data is crucial in designing lessons and implementing repeated reading strategies.

Following the interest inventory, each student orally read the informational text *A Trip into Space* (See Appendix A) by Sloan and Sloan (1995c). Data is collected through running records and text-based and inferential questions (see Appendix A). These questions are used to measure students' comprehension. This data is considered baseline data because students are reading and answering comprehension questions without using the repeated reading strategy.

All reading passages used in this study contain a range of between 100-200 words and fall within the boarder of students' instructional and fustrational levels to keep with the intended use of repeated readings (Therrien & Kubina, 2006). Doing this exposes students to more complex text, vocabulary, and concepts and with room to improve fluency and comprehension throughout the study. Informational text is used to comply with the Common Core Standards requirement of student's in grades K-5 reading 50% informational text (http://www.corestandards.org/other-resources/key-shifts-in-english-language-arts/).

In the second week of the study, each student engaged in timed repeated reading. Students began by reading from the text *Unusual Machines* (See Appendix B) by Sloan

and Sloan (1995d). After one minute, the each student is stopped and the teacher provides feedback on miscued words. The student records their progress and then reads the same passage again for one minute. The procedure repeats itself four times. The results are compared to the baseline results to determine the effectiveness of repeated reading to improve fluency through timed reading and teacher feedback.

In the third week of the study, students engaged in repeated reading as each student read a passage from the book *Animal Report*, part 1 (See Appendix C) by Sloan and Sloan (1995a) four consecutive times. The first read is a silent read. The second read is an oral read that is recorded. The third read is considered listening-while-reading as the student plays back their recording while reading silently. The final read is a read aloud where running records are taken. Following the read, text-based and inferential questions are asked (see Appendix C). These results are compared to the baseline results to determine the effectiveness of engaging in repeated reading and listening-while-reading to improve fluency and comprehension.

In the fourth week of the study, students engaged in paired repeated reading using the text *Animal Reports*, part 2 (See Appendix D) by Sloan and Sloan (1995a). Students began by reading the text independently, then engaging in paired reading twice, then reading aloud independently. During this time running records are taken to collect data on the accuracy aspect of fluency. Following the fourth read, the student answers text-based and inferential questions (see Appendix D). The results from this reading is compared to the repeated reading the student completed in the previous weeks to see if fluency and comprehension improved when engaging in paired repeated reading with a partner as opposed to reading independently.

In the fifth week of the study, students engaged in vocabulary instruction prior to repeated readings using the text *Sea Animals* (See Appendix E) by Sloan and Sloan (1995b). The teacher identified vocabulary within the passage that would potentially present an obstacle for reading accuracy and comprehension. Then, direct instruction was provided using the Frayer Model prior to the students engaging in repeated readings. After instruction, students engaged in choral reading four times. On the last read, the teacher recorded each student's reading through running records and asked the student text-based and inferential questions (See Appendix E). The results from this reading is compared to the baseline data and repeated readings the student completed in the previous weeks to see if fluency and comprehension improved when engaging in repeated reading with intensive vocabulary instruction prior to reading and choral reading.

At the conclusion of the study, students redid the interest inventory completed at the beginning of the study. This inventory provides data on students' changes in motivation to read as compared to prior to the study.

3.2 Data Sources

The goal of this qualitative research study is to determine the effectiveness of the repeated reading strategy when used with students of special needs reading informational text. This is determined through the improvement of fluency, comprehension, and motivation. Therefore, data collected which informs research is in the form of student completed inventories, observation, running records, and oral responses to comprehension questions. Data is analyzed and reflected upon by the researcher in a teacher researcher journal. The results from the various weeks are triangulated and

analyzed to ensure a valid conclusion. The results are then shared through narratives and tables.

3.3 Data Analysis

The data collected during the course of this study is used to make a conclusion regarding the effectiveness of the repeated reading strategy in regards to students with special needs while reading informational texts. Throughout the study, I argue that each repeated reading exercise improves a student's oral fluency and comprehension. As a result, students' motivation to read also improves. Analyzing the data includes reviewing running records, interest inventories, responses to comprehension questions and reflections made in my research journal.

3.4 Context

Overview of the community. The boro in which Albert Bean Elementary is located is Pine Hill of Camden County, New Jersey. Information regarding Pine Hill is obtained through the United States Census Bureau (http://quickfacts.census.gov/qfd/states/34/3458770lk.html). 68.2% of the population is considered white while 22% is considered African American. 65.2% of the residents are considered a family household, however, 51.6% of the male married population is considered separated. 89.2% of the population is a high school graduate or higher. 92.3% of the population primarily speaks English at home. 11.7% of the population earn an income below the poverty level and 12.2% of the population is unemployed.

Overview of the school. Information about Albert Bean Elementary of Camden County, New Jersey is obtained through NJ School Performance Report (http://www.state.nj.us/education/pr/1213/07/074110060.pdf) from the 2012-2013 school year. The school is one of two pre-k through grade five schools in the district. The student enrollment is 383 students with nearly an equal number of male and female students. Of the students, 98.4% speak English as their primary language at home and 2% of students are considered limited English proficiency. 54.8% of the students are identified as White, 28.2% are identified as Black, 11.7% are identified as Hispanic, and 5.2% are identified as Asian, Native America, or of two or more races. 63% of students are identified as economically disadvantaged (receiving free or reduced lunch). 16% of students are classified and receiving special education services.

Overview of the classroom. The classroom which this study is conducted is a self-contained third through fifth grade multiply-disabled classroom. Participants in the study include four students total in grades four and five. Participants include one African-American, one Hispanic, and two Caucasians students. Fifty percent of the students are female. All of the students are considered economically disadvantaged. At the time of this study, one student is nine years old, two students are ten years old, and one student is eleven years old. Participation is voluntary. All students are able to read with at least an 85% accuracy rate on a 2.3 grade level reading passage.

Chapter 4

Four Weeks of Repeated Readings

This chapter contains a detailed description of the procedures and findings that occurred each week throughout the study. During this time, four variations of the repeated reading strategy as supported by the studies referenced in chapter two were practiced. The first week recounts the collection of base-line data. The second week describes the procedure and results of using the timed repeated reading strategy. The third week details the repeated reading strategy in conjunction with listening-while-reading. The fourth week reports the method and findings of paired repeated reading. The fifth week depicts the outcomes of vocabulary instruction prior to choral repeated reading. The last section compares and contrasts the results of the interest inventory prior to and after the data collection period.

The influence of vocabulary and schema consistently effected students' ability to read and comprehend text throughout the study. This was evident by students' repeated miscues on vocabulary words that specifically related to the text's topic and students' responses to comprehension questions which pertained to pertinent vocabulary words from the text. Timed repeated readings tended to deliver lower accuracy and comprehension rates than listening-while-reading and paired reading. Both listening-while-reading and paired reading appear beneficial for students more so than no repeated reading strategy at all. While students enjoyed practicing the various repeated reading strategies, students also became wary of repeated readings. This may have influenced students' attitudes towards reading and the overall effectiveness of the repeated readings strategies.

4.1 Week One: Base-Line Data Collection

During this first week, base-line data was collected on students' ability to accurately read informational text and answer text-based and inferential questions on a cold read, without using the repeated reading strategy. This data was important to collect as it was used to measure progress from variations of the repeated reading strategies in the preceding weeks. To collect this data, students read the informational text *A Trip into Space* (See Appendix A) by Sloan and Sloan (1995c). This text is on a 2.6 level and contains 133 words. Students were given the option to refer to the text when answering text-based and inferential questions.

Four students participated in this study. Student 1 scored 95% accuracy on reading rate, an instructional level. Student 2 scored 88% accuracy on reading rate, a frustration level. Student 3 scored 89% accuracy on reading rate, a frustration level. Student 4 scored 96% accuracy on reading rate, an instructional level. These scores were calculated through running records. According to Leslie and Caldwell (2011), half the participants were on frustration level and half of the students were on instructional level on the base-line data. Therefore, the data collected from the following weeks of repeated reading techniques is measured against students who read a 2.6 level informational text on the borderline of frustration level and students who read on the instructional level.

When reviewing miscues, it was noted that Student 2 and Student 3, who both read at frustration level, consistently miscued on words that contained inflected endings such as *resting, rockets, opened, having,* and *booster.* In addition to these words, Students 1, 2, and 3 also miscued on the words *launching* and *satellite*. These words may

have posed a challenge because they are low frequency words or because they have unusual vowel patterns.

Two comprehension text-based comprehension questions and two inference based comprehension questions (See Appendix A) were asked following the reading. Student 1, who read at instructional level, scored 50% accuracy on text-based questions and 50% accuracy on inference based questions. Student 2, who read at frustration level, scored 100% accuracy on text-based questions and 25% accuracy on inference based questions. Student 3, who read at frustration level, scored 50% accuracy on text-based questions and 0% on inference based questions. Student 4, who read at instructional level, scored 50% accuracy on text-based questions and 0% on inference based questions.

It is interesting to note that Student 2, who read at frustration level, outscored Student 1 and Student 4 on text-based comprehension questions and Student 4 on inference based questions. A reason for this is that Student 1 and Student 4 who read at instructional level may be what Samuels (1976) refers to as "word-callers". These students devote more attention to reading accurately, then comprehending. Therefore, while their reading accuracy scores indicate instructional level, their comprehension scores do not align.

When analyzing the responses to comprehension questions, it was noted that the last comprehension question (see Appendix A) for this passage appeared difficult for students to answer. This question asked students what they think the satellite will do in space. The text (see Appendix A) states that the satellite will go into orbit above Earth. However, none of the students referred to orbiting the Earth in their response. Yet, all participants accurately read the word *orbit*. This leads me to wonder if perhaps students

were unfamiliar with the meaning of the word *orbit*, therefore, did not incorporate it into their answer.

From this base-line data it appears that vocabulary influences students' ability to answer text-based questions and that through some students may read a text on instructional level, an instructional level for comprehension does not align.

4.2 Week Two: Timed Repeated Reading

During the second week, students measured their progress in reading accuracy through timed repeated readings. Students read a passage from *Unusual Machines* (See Appendix B) by Sloan and Sloan (1995d) four times in one minute intervals. The passage is on a 2.6 reading level and contains 159 words. After a minute of reading, miscues were reviewed through brief decoding exercises which included identifying sounds of text features, identifying syllables through scalloping, modeling pronunciation, and concise explanations of word meaning. Data was not collected on comprehension as students were cued to read for accuracy and speed not comprehension. Students also read at various rates preventing them from reading to the same point in the passage, making comprehension difficult to measure. Data was also not formally collected on prosody or pacing as these fluency skills were not addressed.

According to Therrien and Kubina (2006) students should keep rereading until a predetermined criteria is met. In this study, because of time constraints, criteria were not established ahead of time. Instead, a percentage increase was recorded for each read where the number of words read accurately improved. Table one through four below outline the results of each student.

Table 1. Student 1 Data Collection during Timed Repeated Reading

Number of Read	Number of Words Read	Number of Words Read Accurately	Percentage of words read accurately	Percent Increase of words read accurately from first read
1	75	69	92%	
2	63	59	94%	
3	69	66	96%	
4	76	72	95%	4%

Table 2. Student 2 Data Collection during Timed Repeated Reading

Number of Read	Number of Words Read	Number of Words Read Accurately	Percentage of words read accurately	Percent Increase of words read accurately from first read
1	62	57	92%	
2	69	66	96%	16%
3	69	68	99%	19%
4	69	66	96%	16%

Table 3. Student 3 Data Collection during Timed Repeated Reading

Number of Read	Number of Words Read	Number of Words Read Accurately	Percentage of words read accurately	Percent Increase of words read accurately from first read
1	60	52	87%	
2	78	64	82%	23%
3	61	51	84%	
4	75	64	85%	23%

Table 4. Student 4 Data Collection during Timed Repeated Reading

Number of Read	Number of Words Read	Number of Words Read Accurately	Percentage of words read accurately	Percent Increase of words read accurately from first read
1	63	56	89%	
2	63	54	86%	
3	81	73	90%	30%
4	107	99	93%	76%

Analyzing the patterns of percentage increase of words read accurately shows that no two students followed the same pattern. Student 1 did not improve until the fourth read. At this time improvement was only at 4%. Student 2 experienced inconsistent improvements as improvement began at 16% on the second read, peaked at 19% on the third read, then returned to 16% on the fourth read. While the scores on the second and fourth read for Student 2 were identical, only one of the three errors made were the same between these two reads. This particular miscue was on the word *submersible* and was made on every read except the third read. Like Student 2, Student 3 consistently increased on the second and fourth reads by 23% from the first read, however, did not increase on the third read. Student 3 did not make the same errors on the second and fourth read regardless of the similar scores and remained on frustration level throughout the four readings. Finally, Student 4 significantly improved in reading accuracy on the third and fourth read. In general, all students improved reading accuracy by the fourth read as suggested by Therrien and Kubina (2006).

When analyzing miscues across the participants, it is noted that several words were repeatedly miscued, even after correction and feedback. Some of these words included *submersible*, *lunar*, *operators*, and *compactor*. All of these words are low frequency words that are specific to the context and contain multiple syllables and

affixes. In addition, when discussing these words with students, it was apparent that students contained very little schema for these terms, limiting their ability to draw connections to the text. Perhaps, this lack of background knowledge impacted some students' ability to experience increased success with timed repeated readings.

While data was not collected on prosody and pacing, it was informally noted through anecdotal notes that, in general, student's reading became more rushed with each consecutive read. This factor of rushing through reading to read more words may have also influenced student's error rate. The data supports this as sight words such as *a*, *like*, *or, the, on, it, small,* and *can* are consistently omitted in the second, third, and fourth reads across all participant's running records.

When comparing timed repeated readings to the baseline data, it is interesting to note that only one out of four students read with increased accuracy on the fourth read as compared to the first and only read of the base-line data taken during week one. In this case, the data collected though running records suggests that for three out of four participants, timed repeated reading did not improve accuracy.

4.3 Week Three: Listening-While-Reading

During the third week of the study, students engaged in repeated reading through listening-while-reading. To do this, students began by independently reading a text. Then students recorded themselves reading the same text using an Ipad. On the third read, students listened to their recorded reading while following along in the text. For the final read, students reread the passage while running records were taken to collect data on reading accuracy. Following this, text-based and inferential questions were asked and oral responses were recorded. This procedure was done to investigate and compare

student's reading accuracy and comprehension when engaging in listening-while-reading as compared to not using a listening-while-reading technique. The passage used was *Animal Report*, part 1 (See Appendix C) by Sloan and Sloan (1995a). This passage is considered to be on a 2.6 reading level and contains 157 words.

During this week, Student 1 read at 99% accuracy after listening-while-reading as compared to 95% accuracy during week 1. Student 2 read at 93% accuracy as compared to 88% accuracy during week 1. Student 3 read at 85% accuracy as compared to 89% accuracy during week 1. Student 4 read at 97% accuracy as compared to 96% accuracy during week 1. Therefore, three out of four participants increased their word accuracy as compared to week 1 and three out of four participants read at instructional level or higher after using listening-while-reading repeated reading. This data suggests that listening-while-reading repeated reading can increase reading accuracy.

When comparing comprehension achievement to week one, all four participants increased in percentage when answering inferential questions. However, only Student 4 increased in percentage when answering text-based questions. Student 2 maintained a consistent percentage accurate to the base-line data.

When comparing results among participants, it is noted that Student 1 scored 99% accuracy when reading but answered all the text-based comprehension questions incorrectly. Meanwhile, Student 2 scored 93% accuracy when reading and answered all the text-based and comprehension questions 100% accurately. According to the *Qualitative Reading Inventory 5* by Leslie & Caldwell (2011) Student 2, who scored 93% accuracy, was reading at their instructional level and Student 1, who read at 99% accuracy, was reading at independent level. However, when analyzing comprehension,

this does not seem to be the case. The student who answered 100% of the comprehension questions accurately but read with 93% accuracy seemed to have a better grasp on what was read than the student who answered only 50% of the comprehension questions correctly but read with 99% accuracy. In addition, while time was not kept while reading, anecdotal notes state that the student who answered all the comprehension questions accurately read very slowly. Perhaps, this student was reading slowly so that more attention could be devoted to creating meaning from the words read. Meanwhile, the student who scored poorly on comprehension may be what Samuels (1976) refers to as a "word-caller". This type of reader is one who dedicates much of their attention to decoding, leaving little attention to comprehension. The result is that reading may sound very fluent. However, this is deceiving as true fluency should lead to comprehension.

Student 4 improved in all three areas measured: word accuracy, text-based questions, and inference based questions as compared to the base-line data. This student already read at instructional level and continued to progress on instructional level with the use of listening-while-reading repeated readings. Student 3, however, read at frustration level and continued to read at frustration level. While improvement was seen in answering inferential questions, progress was limited. This data suggests what Clay (2005) describes an instructional level to be: an appropriate level for a child to learn from. Because Student 3 was not reading at an instructional level, learning was limited, even when the listening-while-reading repeated reading strategy was implemented. Overall, the data suggests that listening-while-reading repeated reading has the potential to improve reading accuracy and comprehension when reading informational text on a

student's instructional level, but this strategy does not necessarily prevent students from becoming "word-callers" (Samuals, 1976).

4.4 Week Four: Paired Repeated Reading

During the fourth week of the study, students engaged in paired repeated reading. Each student read *Animal Reports,* part 2 (See Appendix D) by Sloan and Sloan (1995a) one time independently. Then, students took turns reading the text with a partner twice. On the final read, students again read independently and running records were taken to record accuracy while reading. Following this, text-based and inferential questions were asked to collect data on comprehension. The text is on a 2.6 reading level and contains 127 words.

In this activity, three out of four students improved word accuracy as compared to the base-line data in week one. Student 1was the only student who decreased in word accuracy from 95% to 94%. Student 2 increased from 88% to 97%. Student 3 increased from 89% to 93%. Student 4 increased from 96% to 97%. It is also important to note that according to Leslie and Caldwell (2011) all students are reading at instructional level, regardless of Student 1's decrease in word accuracy. More importantly, no students are reading at frustration level as was the case using in the base-line data.

When looking at this, what is remarkable is that Student 2 and Student 3, who read on frustration level on the base-line data jumped to instructional level using the paired repeated reading strategy. During this activity, Student 1 and Student 2 were paired together and Student 3 and Student 4 were paired together. In this case, the data suggests that repeated reading with a partner increases word accuracy.

As was the case when base-line data was collected, it was noted that all students struggled with the same words, regardless of paired repeated reading. These words included *marsupial* and *bison*. Like the words previously noted, these words are low frequency words with unusual vowel patterns. In week one, students read independently, eliminating the opportunity for participants to learn from each other. This week, students read with a partner, providing support for one another. It is possible, that there were other words in the passage which were read accurately as a result of students learning from one another, however, these words seem to not be the case. Data on reading accuracy was not collected on students paired reading trials; therefore, other words which may have improved as a result of paired reading are not noted.

In terms of comprehension, Student 1 and Student 3 decreased in text-based and inferential comprehension scores from the base-line data, both scoring 0% in all areas. Student 2 maintained the same score in text-based comprehension questions and increased in inferential comprehension questions. Student 4 increased in text-based and inferential questions as compared to the base-line data.

One of the comprehension questions (see Appendix D) asked participants to name similarities between the North American bison and the South American llama. Students responses included that they are both animals, they both live somewhere in America, or that they could carry heavy loads. While all these answers were acceptable, none of the students mentioned that they are both mammals, a point that was specifically made in the text. Again, perhaps students did not make this conclusion because even though they can decode the word *mammal*, they were not sure of its meaning. Therefore, they did not associate it as a similarity between the two animals.

Because Student 3 increased in word accuracy but decreased in comprehension, Student 3 may have become a "word-caller" (Samuels, 1976). This might be the result of learning new words from paired reading, but not spending enough attention to comprehension. Student 1 seemed to decrease in all areas of this activity. It may have been the case that this student was distracted by their partner and therefore, not able to pay attention to text or details, causing accuracy and comprehension to suffer despite repeated readings. In contrast, Student 2, who Student 1 was partnered with, scored perfectly in text-based and inferential comprehension questions and improved accuracy. Student 4 also seemed to benefit greatly from this activity as improvement was seen in all areas measured.

This data suggests that when students are paired with others they can benefit from; paired repeated reading has the potential to increase comprehension and accuracy, however, vocabulary may still influence students' reading rate and comprehension.

4.5 Week Five: Vocabulary Instruction and Choral Reading

After considering the data collected in the first four weeks of this study, it was decided that the repeated reading procedure for the final week of the study should incorporate some form of vocabulary instruction. A lack of vocabulary knowledge and schema while reading during the previous four weeks seemed to inhibit students' ability to experience increased improvements in reading accuracy and comprehension. Therefore, before students read the passage *Sea Animals* (See Appendix E) by Sloan and Sloan (1995b); students complete the Frayer model with targeted vocabulary from the text. These vocabulary words included *mammal*, *hide*, *ivory*, *rare*, *pod*, and *mollusk*. The hope in providing vocabulary instruction prior to reading was to improve both

reading accuracy and comprehension when students engaged in repeated reading. The repeated reading variation chosen for this activity was choral reading.

Another factor to consider is that this week was the only week that the teacher provided guided instruction. In past weeks, the instructor taught participants how to use the strategy, and then allowed the students to work through the strategy on their own. This week, the teacher was involved in both using the Frayer model and choral readings. After each of the targeted vocabulary words were discussed using the Frayer model, students engaged in choral reading with the instructor four times. Then, data was taken using running records and the responses to comprehension questions. *Sea Animals* (Sloan & Sloan, 1995b) contains 170 words and is considered a 2.6 level text.

Using this strategy, all students improved in word accuracy as compared to the base-line data and according to Leslie and Caldwell (2011) all students read at the independent level. This was the most significant improvement in reading accuracy throughout the study. In addition, three out of four participants were able to read all of the targeted words accurately. This improvement suggests that vocabulary instruction prior to reading increases reading accuracy.

Students 1, 3, and 4 scored 100% on text-based comprehension questions and Students 2, 3, and 4 showed improvement in inferential comprehension questions as compared to the base-line data. Similar to the previous week's read, one comprehension question asked students to identify something similar between the walrus and humpback whale. While all participants received credit for their responses, only one participant referred to both animals as mammals, a vocabulary word that was targeted prior to reading. Interestingly, Student 1, who was the only student to not improve when

answering inference based questions scored 0%, the same score that occurred for inference based questions during paired reading. Perhaps, this student is distracted when reading with others which resulted in a lower score.

This data suggests that most students improve reading accuracy and comprehension when vocabulary instruction is used prior to repeated readings.

3.6 Interest Inventory

At the start of the study, an interest inventory asking students to anonymously rate various aspects of reading on a scale of one to five with five being a very good rating and one being a poor rating was completed. Students were asked to complete the inventory anonymously in the hopes that honest answers would be reported, not answers that students might think the instructor wanted to see. Therefore, since there was no identifying information on the interest inventory, the four participants' responses were averaged. At the start of the study, on average, students rated the activity of reading as a 4. At the end of the study, this score decreased to 3.5. At the start of the study, on average, students rated how they viewed themselves as readers as 4.75. By the end of the study, students rated themselves as 4.5. At the start of the study, on average, students rated reading informational text with a 4. By the end of the study, students rated informational text as a 2.75. At the start of the study, on average, students rated reading the same text over and over again as a 3. By the end of the study, this number decreased to a 2.

Overall, these scores indicate that motivation to read informational text using repeated reading strategies may have, in fact, decreased as a result of the study. However, according to anecdotal notes taken at the time of the study, it was noted that

during the second week of the study when students recorded their progress during timed readings, students enjoyed calculating, recording, and seeing progress in each reading interval. At the time, students seemed motivated to reread and beat their previous record. During week three when students recorded their reading, it was noted that students were excited to use the Ipad to record and listen to themselves read.

These notes are a contrast to the decreased scores on the interested inventory at the end of the study period as compared to the start of the study period. Perhaps a reason for this may have been that students were exhausted by the regulations of the study by the time the post-procedure interest inventory was given. Perhaps students forgot about their positive experience at the time of each activity, or perhaps students were really giving honest answers knowing that the survey was being completed anonymously.

One category that did not decrease on the interest inventory regarded reading with a partner. Before the study, on average, students rated reading with a partner with a 4.25. After the study, all students rated reading with a partner with a perfect 5. To confirm these results, it was noted that when students were asked to read with a partner during week four, students were very excited to do this and were eager to work with a friend. However, taking into consideration the previous discussion on Student 1's struggle with paired and choral repeated readings, while all other students seemed to benefit from these activities, I am curious why this student still rated the activity as a 5.

A final question asked students what they thought they could do to become better readers. In the beginning of the study, students' responses included try harder, help a friend, and sound out words. At the end of the study, responses changed to: read 100 books in school, by reading, practice, and by reading over what I read. These responses

indicate that while some students learned new strategies for becoming better readers, some students did not.

Overall, this data indicates that perhaps the purpose of using the repeated reading technique needs to be reinforced more rigorously during instruction. To improve motivation, perhaps more variety in text should be introduced or students should be allowed choice in the text they read or the repeated reading strategy they practice.

4.7 Summary of Results

To summarize the results, I will first look at the progress students made at decoding as a result of using various repeated reading strategy. Then, the progress students made at comprehending informational text using the repeated reading strategy will be examined. Finally, student's motivation will be addressed.

Table 5 illustrates the results of reading accuracy using the various repeated reading strategies as compared to the base-line data. The results are listed as decimals that represent percentages of questions answered accurately. Numbers printed in italics indicate a decrease percentage from the base-line score. Numbers printed in bold indicate an increase percentage from base-line score.

Table 5. Accuracy

	Without using repeated reading	Timed reading	Listening-while-reading	Paired Reading	Vocabulary Instruction/Choral Reading
Student 1	.95	.95	**.99**	*.94*	**.96**
Student 2	.88	**.96**	**.93**	**.97**	**.98**
Student 3	.89	*.85*	*.85*	**.93**	**.95**
Student 4	.96	*.93*	**.97**	**.97**	**.98**

Italics indicate a decrease percentage from base-line score. Bold indicates an increase percentage from base-line score.

The evidence portrayed in Table 5 suggests that intentional vocabulary instruction prior to repeated reading was the most effective strategy to improve reading accuracy. When this activity occurred, all participants improved reading accuracy from the base-line data. The evidence also suggests that the least effective strategy for improving students' reading accuracy appears to be timed repeated readings. This may have been the case because students may have been focused on reading more words each consecutive read, putting accuracy aside. Timed reading involved corrective feedback through phonics and vocabulary instruction after each reading interval; however, it appears as though intentional vocabulary instruction prior to reading combined with choral reading was more effective in developing reading accuracy as students consistently miscued on the same words. Since three out of four students improved reading accuracy when utilizing listening-while-reading or paired reading, the evidence also suggests that for most students in this study, these activities are more beneficial than no repeated reading strategy.

In addition to analyzing word accuracy, it is also important to analyze comprehension when using repeated reading strategies. Table 6 illustrates these results through decimals that represent the percentage of questions answered accurately. Numbers printed in italics indicate a decrease percentage from the base-line score. Numbers printed in bold indicate an increase percentage from base-line score.

Table 6. Comprehension

	No Repeated Reading		Repeated Reading/Reading while listening		Paired Repeated Reading		Vocabulary Instruction with Choral Repeated Reading	
	Text-based questions	Inference based questions	Text-based questions	Inference based questions	Text-based questions	Inference based questions	Text-based questions	Inference based questions
Student 1	.5	.5	*.0*	**1.0**	*.0*	*.0*	**1.0**	*.0*
Student 2	1.0	.25	1.0	**1.0**	1.0	**1.0**	*.75*	**.75**
Student 3	.5	.0	.5	**.75**	*.0*	*.0*	**1.0**	**1.0**
Student 4	.5	.0	**.75**	**1.0**	**.75**	**1.0**	**1.0**	**1.0**

When analyzing comprehension improvement through repeated reading strategies, it is important to consider text-based questions and inferential questions. Listening-while-reading with repeated reading seems to have been the most effective strategy for improving inferential thinking as all four students showed improved percentages during this activity. Perhaps this was because students had the opportunity to spend less energy on decoding and more energy on thinking while they were listening to their recording. Therefore, the evidence suggests that in this case, students fared better listening to themselves read as opposed to reading with others as was the case in paired reading and choral reading.

Providing vocabulary instruction prior to repeated reading seemed to yield the greatest growth in terms of text-based questions and overall reading comprehension improvement. Also interestingly, two out of three repeated reading activities that measures comprehension showed greater improvement in inferential questions than text-based questions. This evidence suggests that perhaps participants were better able to summarize and apply their thinking than recall and retelling specific vocabulary or details from the text. The assumption that vocabulary affected the participants' ability to answer text-based questions is supported by the improved text-based comprehension scores during the last activity of the study. In the study, vocabulary instruction prior to repeated reading yielded the greatest improvement in comprehension. Overall, the evidence suggests that engaging in some form of a repeated readings activity benefits comprehension more than engaging in no repeated reading activity.

When examining motivation as a result of repeated readings, Table 7 summarizes the results as an average among the four participants.

Table 7. Interest Inventory

	Average score of how students feel about reading	Average score of how students view themselves as a reader	Average score of how students feel about reading informational text	Average score of how students feel about reading the same thing over and over again	Average score of how students feel about reading with a partner
Pre-study procedure	4	4.75	4	3	4.25
Post-study procedure	3.5	4.5	2.75	2	5

According to this data, it appears that motivation to read in general, read informational text, reread, and how students viewed themselves as a reader decreased as a result of the study. These results may be in part due to the strenuous schedule and constraints of the study and materials used throughout the study. In contrast, it appears that students enjoyed reading with a partner as a result of the study.

In closing the findings indicate that intentional vocabulary instruction prior to repeated readings is key to improving accuracy and comprehension. Though results vary, using listening-while-reading and paired reading can also benefit students more so than using no repeated reading strategy. Instructors should be wary not to exhaust students from reading as repeated readings have the potential to decrease student's motivation to read. To make repeated readings a more effective tool strategy to increase motivation, 2 or 3 readings, choice of text, and choice of repeated reading strategy can be taken into consideration. Other results of the study show that while repeated readings are most effective when used on an instructional level, in some cases, students can also improve reading when the strategy is used on frustration level.

Chapter 5

Conclusions, Implications, Limitations, and Questions

Educators of students with special needs have the extraordinary task of teaching students with learning disabilities the skill of reading. This research study has sought to explore the ways that the repeated reading strategy can help this population develop fluency, comprehension, and motivation to read. This chapter contains a summary of the findings, and then addresses the conclusions, implementations, implementation of the study for further research, and limitations of the study.

5.1 Summary of the Findings

This study sought to determine the effects of using the repeated reading strategy with fourth and fifth grade students of special needs when reading informational text. Four variations of the strategy were used: timed reading, listening-while-reading, paired reading, and vocabulary instruction paired prior to choral reading.

The findings suggest that listening-while-reading and paired reading proved to be more beneficial in terms of improving word accuracy and comprehension than no repeated reading strategy used at all. However, a missing component of both these practices was intentional vocabulary instruction prior to repeated reading. This element was key to effective repeated reading exercises involving informational text. In contrast, timed readings tended to be the least effective repeated reading strategy as students often rushed through reading, creating many miscues. Regardless of corrective feedback, students continued to error on vocabulary words as it appeared that they were more concerned with reading more words when being timed than with accuracy or comprehension.

In addition, the findings also suggest that careful and deliberate planning should be done when repeated readings are used with informational text. While repeated readings have the potential to be motivational, it can also have an adverse effect if overused. Students may lose purpose for their reading as a result. When this happens students may become weary of reading; resulting in an increased number of miscues, especially on sight words, and read with less prosody and intonation. An appropriate predetermined number of reads, such as two or three reads, or achievable criteria, such as 20% accuracy improvement, should be established with the student to maintain motivation.

5.2 Conclusions of the Study

When examining the data presenting in chapter four, connections between repeated readings and motivation, comprehension development, and word accuracy can be detected. A sub-question that this study sought to answer was how do students attitudes toward reading change with the use of repeated reading. The results of the interest inventory described in chapter four clearly outlines how students' attitude towards reading decreased as a result of the repeated reading strategy. This outcome seems to be in contradiction to Flippo's (2014) study which found that students were motivated to continue reading as a result of the success experienced using the repeated reading strategy.

However, in this study, while students recognized their success through data collection and feedback, students reported that they do not like rereading a text, giving this question a score of two out of five on the interest inventory after the study procedure. Therefore, the view of repeated readings in this study more accurately matched the

attitudes of the participants in Lovitt and Hansen's (2001) study. Participants in Lovitt and Hansen's (2001) study saw repeated reading as a punishment or remedial work for not achieving performance criteria. Therefore, students were motivated to read to avoid using this strategy.

A second sub-question of this study sought to determine the effects of repeated reading on comprehension. Samuels (1976) based the theory of automatic information processing on the idea that the brain acts as a single channel processor which can only dedicate a limited amount of attention to a task when a new task is simultaneously introduced. When "automaticity" is achieved, the brain is able to dedicate more attention to a new task. While this is a remarkable opinion, this study shows that this shift in attention does not necessarily happen automatically. At times, student's accuracy and comprehension improved with repeated readings and at other times, students were able to read text at an independent level, meaning with 98% accuracy or higher and yet still not be able to answer text-based comprehension questions.

In contrast, a factor that helped students improve comprehension was pairing intentional vocabulary instruction with repeated readings. This was demonstrated by students' comprehension scores making the greatest increase when vocabulary instruction was used prior to choral repeated readings. Staudt's (2009) study supports this practice by recognizing that the more a student knows about a word, the easier and faster that word can be read and text can be understood. Staudt (2009, p. 150) states that "combining intensive word study with the repeated reading…proved a successful plan for improving the reading fluency, word recognition, and comprehension skills of my

students with learning disabilities while at the same time improving their understanding of how our language words."

A final sub-question of this study addressed the effects of repeated reading on fluency. In 1990, Rasinski's conducted a study measuring word accuracy when using a fluent oral model versus repeated reading without a model. The result of Rasinki's (1990) study showed no difference in outcomes between the two strategies and suggested that the techniques be used simultaneously to benefit students. In this study, reading accuracy was measured when students engaged in listening-while-reading to their own recorded reading and during paired reading. In conjunction with Rasinski's (1990) study, both listening-while-reading and paired reading yielded improvement in accuracy. This confirms research suggesting that repeated readings can improve word accuracy.

The big question this study addressed was how repeated readings will effect fourth and fifth grade students with disabilities when reading informational text. The answer to this is not so simple. Samuels (1979) never intended repeated readings to be a reading program or a cure to for all struggling readers. Instead, this strategy works as a supplement to an already established reading program and can be used in a variety of ways to meet the diverse needs of learners. With that in mind, the repeated reading strategy is just one factor in a student's reading success. Other important components to keep in mind are materials, time availability, availability of instructor support, student's motivation, and reading levels, in addition to the type of repeated reading strategy that is used. These components will likely vary from student to student and classroom to classroom. Understanding these factors, an intuitive educator will recognize what pieces

of the puzzle will fit together to create the most effective repeated reading program for students.

5.3 Implementation of Research

As an intuitive educator, it is important to consider the results from available research to implement effective and appropriate teaching strategies. From this study, some important implementations to consider include the effective use of time, instruction, and interest.

While the repeated reading strategy is beneficial for students, it is important to recognize and take into consideration the amount of time the strategy will consume when used on a regular basis. Because students are rereading a text, in some cases several times, the classroom schedule needs to be taken into consideration. In this study, listening-while-reading and paired reading seemed to be the most time effective repeated reading strategies that yielded the greatest improvements in accuracy and comprehension. In addition, these two variations of the repeated reading strategy could be completed independently at a center or reading station. Students can be held accountable as their reading can be recorded or through their partner. Therefore, out of the strategies used in this study, these two seem to be the most conducive in a classroom setting.

An important factor of this study was the use of informational text as opposed to fictional text or poetry as was used in other studies. Because informational text often contains vocabulary specific to a topic, vocabulary instruction prior to repeated reading is an important consideration for further implementation. As discussed earlier, students did not necessarily transfer attention from decoding to comprehension, even when reading at an independent level. Instead, the most notable progress occurred when intentional

vocabulary instruction was implemented prior to repeated readings. Therefore, teachers should be mindful and intentional when implementing repeated readings of informational text.

Finally, to avoid a decrease in motivation to read, as seen in this study, educators should be open to offering students a variety of high-interest informational texts when using the repeated reading strategy. When appropriate, students can also be given the choice of what variation of repeated reading will be used. To improve the effectiveness of the strategy, instructors should take student's interests into consideration when planning lessons involving informational text.

Because effective teaching is a critical component of a student's reading success, taking these factors into consideration can yield immense benefits for struggling readers.

5.4 Limitations of the Study

While this study was conducted with authenticity, limitations existed which effected the results of the study. One obvious limitation was the small sample size. The eligibility criteria reduced the number of participants. It is possible that a larger sample size would cause different results.

A second consideration was that though all participants had an IEP and were placed in a self-contained multiply disabled class, their classification was not taken into consideration. The reason for this is that in the district where this study took place classification does not determine placement or instructional method; rather a student's individual learning characteristics are determining factors. This means that a student who is classified as autistic is not automatically placed in an "autistic classroom" and taught through Applied Behavioral Analysis. Rather, this multiply disabled classroom is

composed of students who are classified as autistic; multiply disabled, cognitively impaired, and communication impaired and receive instruction based on their individual needs.

Yet another consideration is the amount of time in which this study took place. Though the study occurred over five calendar weeks, the actual number of days that the study occurred was 16 days. This was due to scheduled days off of school and half days due to various reasons.

Therefore, student's had a very limited and intermittent amount of time to practice each repeated reading technique.

A fourth limitation is that this study was the first study this researcher conducted. Therefore, the process of developing a methodology, collecting and analyzing data, and relaying findings was limited due to a lack of experience.

5.5 Further Questions

A result of effective research is that not only do driving questions find results, but new questions occur as an outcome. In essence, this is the nature of research. Because teacher research involves many variables that can potentially change from year to year or even day to day, it is logical that new questions will develop that will drive future studies.

This research study was conducted in a very limited amount of time. Therefore, while growth was seen on individual texts used, overall reading progress was not detectable outside of this study. What would happen if students had more time to practice using each of the repeated reading strategies? Would greater growth and progress within and outside of the context of the study be recorded?

Research has shown that choice is a major factor in students' motivation. This study did not afford students any choice in text of activity. What if students were offered the choice of which repeated reading strategy was used or what topic of informational text was read? Would these choices have helped in motivate students to use the repeated reading strategy?

This study measured the accuracy component of fluency and comprehension. However, what would happen if prosody and/or pacing are also considered? Would these factors have influenced comprehension, motivation, or accuracy? In this study, students' comprehension was only assessed through text-based and inferential thinking questions. What if critical thinking questions were also used? Would this have changed student's comprehension results?

In essence, the more that is discovered about teaching struggling reader, the more that questions will arise. Educators who commit to teaching this population of readers face the exceptional challenge of giving literacy and education to a growing population of children who will one day impact the future. It is up to us to tackles these questions with determination, knowing that the effects of our research and dutifulness of our practice will not be forgotten.

References

Clay, M. M. (2005). *An Observation Survey of Early Literacy Achievement*. Portsmouth, NH: Pearson.

Cochran-Smith, M. & Lytle, S. (2009). *Inquiry as Stance Practitioner Research for the Next Generation*. New York, NY: Teachers College Press.

Common Core State Standards Initiative Preparing America's Students for College & Career. (2014). *Key Shifts in English Language Arts*. Retrieved from http://www.corestandards.org/other-resources/key-shifts-in-english-language-arts/

Flippo, J. (2014). *Repeated reading and motivation.* (M.S., Eastern Oregon University). *ProQuest Dissertations and Theses,* Retrieved from http://search.proquest.com.ezproxy.rowan.edu/docview/1547382041?accountid=13605

Leslie, L. & Caldwell, J. S. (2011). *Qualitative Reading Inventory-5*. Boston, MA: Pearson.

Lovitt, T. C., & Hansen, C. L. (1976). The use of contingent skipping and drilling to improve oral reading and comprehension. *Journal of Learning Disabilities, 9*(8) Retrieved from http://search.ebscohost.com.ezproxy.rowan.edu/login.aspx?direct=true&db=lfh&AN=4727086&site=ehost-live

McCormick, S., & Zutell, J. (2011). *Instructing Students Who Have Literacy Problems, Sixth Edition*. Boston, MA. Pearson.

Moyer, S. B. (1982). Repeated reading. *Journal of Learning Disabilities, 15*(10) Retrieved from http://search.ebscohost.com.ezproxy.rowan.edu/login.aspx?direct=true&db=lfh&AN=4734485&site=ehost-live

NJ School Performance Report (2012-2013). Dr. Albert M. Bean, Pine Hill Boro. Retrieved from http://www.state.nj.us/education/pr/1213/07/074110060.pdf

O'Connor, R. E., White, A., & H Lee Swanson. (2007). Repeated reading versus continuous reading: Influences on reading fluency and comprehension. *Exceptional Children, 74*(1), 31-46. Retrieved from http://search.proquest.com/docview/201217435?accountid=13605

O'Shea, Lawrence J., Sindelar, Paul T., & O'Shea, Dorothy J. (1985). The Effects of Repeated Readings and Attentional Cues on Reading Fluency and Comprehension. *Journal of Literacy Research, 17*(2), 129-142. Retrieved from http://jlr.sagepub.com/content/17/2/129.full.pdf+html

Rasinski, T. V. (1990). Effects of repeated reading and listening-while-reading on reading fluency. *Journal of Educational Research, 83*(3) Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=fth&AN=5005608&site=ehost-live

Samuels, S. J. (1997). The method of repeated readings. *The Reading Teacher, 50*(5), 376-381. Retrieved from http://search.proquest.com/docview/203268032?accountid=13605

Samuels, S. J. (1976). Automatic decoding and reading comprehension. *Language Arts, 53*(3), 323-325. Retrieved from http://www.jstor.org/stable/41404155

Shagoury, R. & Power, B. (2012). *Living the Question A Guide for Teacher-Researchers*. Portland, ME: Stenhouse Publishers.

Sloan, P. & Sloan S. (1995a). *Animal Reports*. South Melbourn, Austrailia: Sundance Publishing.

Sloan, P. & Sloan S. (1995b). *Sea Animals*. South Melbourn, Austrailia: Sundance Publishing.

Sloan, P. & Sloan S. (1995c). *A Trip Into Space*. South Melbourn, Austrailia: Sundance Publishing.

Sloan, P. & Sloan S. (1995d). *Unusual Machines*. South Melbourn, Austrailia: Sundance Publishing.

Staudt, D. H. (2009). Intensive word study and repeated reading improves reading skills for two students with learning disabilities. *The Reading Teacher, 63*(2), 142-151. Retrieved from http://search.proquest.com/docview/203286987?accountid=13605

Therrien, W. J., & Kubina, R. M.,Jr. (2006). Developing reading fluency with repeated reading. *Intervention in School and Clinic, 41*(3), 156-160. Retrieved from http://search.proquest.com.ezproxy.rowan.edu/docview/211720918?accountid=13605

United States Census Bureau (2010). Retrieved from http://quickfacts.census.gov/qfd/states/34/3458770lk.html

Appendix A

A Trip Into Space

The space shuttle is on the launching pad. It is getting ready to go into space. The astronauts are in the space shuttle. They are now ready for blastoff. The large booster rockets are carrying the space shuttle into space. The space shuttle is in orbit high above Earth. The astronauts are working inside the space shuttle. A satellite is on the cargo bay. When the cargo bay doors are opened, the satellite is let go into space. The satellite goes into orbit above Earth. An Astronaut is floating in space near the space shuttle. The astronauts are having something to eat. They have special food on the space shuttle. Now the astronauts are resting inside the space shuttle. The space shuttle is landing. It looks like an airplane.

A Trip Into Space Comprehension Conversation Questions

Text Based Comprehension Questions

1. Where is the space shuttle going?
2. What are some things a space shuttle needs to go into space?

Inference Based Comprehension Questions

1. The last sentences of the text say, "The space shuttle is landing. It looks like an airplane." Why would a space shuttle look like an airplane?
2. The text says, "When the cargo doors are opened, the satellite is let go into space." What do you think the satellite will do in space? What sentence helped you know that?

Appendix B

Unusual Machines

A car crusher or compactor is a large machine. This machine can squeeze a large car into a small, heavy block of metal. A submersible is a machine used underwater. This machine runs on batteries and can stay under the water for a long time. It has arms on it so that operators inside can do work outside. A lunar rover is a kind of moon car. It is like a beach buggy made to work on the moon. This moon car was left on the moon when the astronauts left. The Hubble Space Telescope is a large seeing machine. This telescope can look far into the universe and see stars we cannot see with our eyes. It sends what it sees back to us by radio signals. A television set uses signals to make pictures. Television cameras turn pictures into signals that are sent through the air. The television set turns the signals back into pictures.

Appendix C

Animal Reports, part 1

The koala is an Australian marsupial. The Koala has gray fur. It has strong legs with sharp claws. The koala lives in gum trees. The koala eats gum leaves. It rarely drinks water.

The bison is a North American mammal. It is known as the American buffalo. The bison is a huge animal. It has a large body and head. The bison once lived on the prairie of North America. The bison can run fast on its strong legs.

The llama is a South American mammal. The llama is a member of the camel family. It has a long neck and woolly coat. The llama lives on the plains and mountains of South America. The llama is a good climber and can carry heavy loads.

Animal Reports, part 1 Comprehension Conversation Questions

Text Based Comprehension Questions

1. Where do koalas live?
2. What is something similar about the North American bison and the South American llama?

In Your Head Comprehension Questions

1. Which animal would do best in colder weather? Which sentence from the text supports your answer?
2. Why would a koala need to have sharp claws and strong legs? Which sentence from the text supports your answers?

Appendix D

Animal Reports, part 2

The giant panda is a mammal. It looks like a bear. The giant panda is a large animal. It has black and white fur on its body. This rare animal lives in the mountain forests of central China. The giant panda eats some kinds of bamboo and fruit. It sometimes eats small animals.

The lion belongs to the cat family. The lion is a large animal. It has a strong jaw and sharp teeth. Its paws are large, with long, powerful claws. The lion lives in East Africa and India. The lion eats other animals such as antelope, zebra, and smaller animals.

The bat is a flying mammal. The bat looks like a mouse. Its wings are made of thin skin joined to its long fingers and legs. Bats live in dark places. They sleep during the day and come out at night. Most bats eat large insects. Bats keep the number of insects down.

Animal Reports, part 2 Comprehension Conversation Questions

Text-based Comprehension Questions

1. What does a lion and giant panda have in common?
2. Where do bats live?

Inference Based Comprehension Questions

1. Why would bats need wings? What sentence in the text supports your answer?
2. Why would a lion need sharp teeth and powerful claws?

Appendix E

Sea Animals

The Walrus is a large sea mammal with a tough hide. It can grow to be twelve feet long and to weigh up to 3,000 pounds. The walrus has two ivory tusks. It uses the tusks to fight and uses them as hooks when climbing onto ice.

The humpback whale is a very large sea mammal. It can grow to be up to 50 feet long. The humpback whale is found in all oceans, but it is now a rare animal. The humpback whale sings songs that can be heard over long distances. Sometimes a group, or pod, of whales will sing the same song.

The giant clam is a sea animal. It lives on coral reefs in the Indian Ocean, the Red Sea, and the western Pacific Ocean. The giant clam is a mollusk. This means it has a soft, boneless body. The giant clam is covered with a hard, wavy shell. This animal can be more than four feet long.

Sea Animals Comprehension Conversation Questions

Text-Based Comprehension Questions

1. What is something similar between the Walrus and Humpback Whale?
2. What is a giant clam's body like?

In your head Comprehension Questions

1. Which animal would prefer to be in colder water? What sentence let you know this?
2. Why would a humpback whale sing? What sentence let you know this?