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THE EFFECTS OF REREADING AND SELF-GRAPHING ON THE READING FLUENCY AND COMPREHENSION OF THIRD GRADE STUDENTS WITH SPECIAL NEEDS

by
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Dedication

This thesis is dedicated to my daughter, Rileigh Paige, for being so patient while I completed hours and hours of research, writing, and studying to complete this thesis and Masters Degree. I also dedicate this thesis to my parents, Vincent and Beverly, for their unending support and guidance not only for this program, but also for every endeavor along the way. I would also like to dedicate this to Adam, for always believing.

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Abstract

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The purpose of the study was to examine the effects of rereading and self-graphing on fluency and comprehension of third grade students with special needs. This study implemented a pretest-posttest design. The participants were six students with special needs from a third grade inclusion classroom reading at least two grade levels below third grade. Data was collected during a baseline phase, intervention phase, and post-intervention phase. The independent variables were the use of rereading and self-graphing of passages from the *Critical Reading Inventory* and The *Jerry Johns Basic Reading Inventory*. The dependent variable was the measure of the participants' reading fluency and comprehension using the *Critical Reading Inventory* and The *Jerry Johns Basic Reading Inventory*. Overall, the results of the study demonstrated reading and self-graphing to be an effective intervention to increase students' fluency and comprehension. Participants in the study showed an increase in both fluency and comprehension by rereading and self-graphing results. Three participants had a greater increase in fluency, than in comprehension. Three of the participants had a greater increase in comprehension than in fluency. Results of this study show that rereading and self-monitoring of progress can be an effective strategy to improve the reading fluency and comprehension for students with special needs.

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CHAPTER 1

Introduction

The National Reading Panel has identified five areas of reading instruction that are imperative to successful reading. These five areas are phonemic awareness, phonics, vocabulary, fluency, and comprehension (National Institute of Child Health and Human Development, 2000). Considering that the goal of reading is to come away from the text having gained meaning, comprehension is an area of interest.

The ability to decode, and to do so with fluency, affects the ability to comprehend text. While some students may not have difficulty comprehending what they are able to fluently read, others struggle with this component of reading. Separating the skills of fluency and comprehension may be difficult because it would stand to reason that increasing fluency would likely increase comprehension, in some instances. For example, if a student is using much of their cognitive resources for decoding, they may have little resources left for comprehending. It is noted, that some students do not have strong fluency, but still have sufficient comprehension. This study will seek to identify a relationship between fluency and comprehension

Many strategies have been used to increase comprehension of readers. One strategy is to go back to the text and reread. Some students may be reluctant to go back to read because it is extra work, and they do not see the merit in doing so. Therefore, motivation is not high to go back and reread a passage for a second time. If children can see the benefits of rereading through self-management of their comprehension scores, they may be more inclined to do so. Over time, if children have concrete evidence of the

fruits of their labor, they may self-monitor and automatically reread passages when necessary for improved comprehension.

Once children have learned to decode words, they can begin to read meaningful texts. The ability to simply decode does not guarantee that meaning will be gained from reading a text. Students' success in all school subjects is impacted by the ability to effectively comprehend a wide variety of reading material. As children advance into the middle grades they are expected to become more independent in school. If children struggle with comprehension, it will make independently acquiring new information very difficult.

Having children utilize self-management techniques will allow them to directly take control of their learning outcomes. In this technique, students will graph their fluency and comprehension on both the first and second readings of all the passages used in the study. The teacher will train participants to graph the fluency based on the words read per minute, and the comprehension, as points earned for each retelling of the passage. This will provide a visual representation of gains for students.

Research Problem

The questions to be investigated in the study include:

1. Will the use of a self-monitoring procedure utilizing graphing and re-reading improve the reading fluency and reading comprehension of third grade students with reading difficulties?

2. What effect will rereading have on reading fluency?

3. Will students begin to reread without prompting as a result of self-management of comprehension scores through graphing?

A group of third grade students from an elementary school in an urban southern New Jersey community will monitor their comprehension scores on given passages. They will graph their fluency and comprehension score after reading the passage once. Then they will reread, and again, graph their fluency and comprehension score for the second reading of the passage. The hypothesis is that their fluency and comprehension will improve with the second reading of the passage. This may be due to a more fluent read on the second reading of the passage than on the first reading. It is also hypothesized that the graphing of their scores, provided that they improve with rereading, will provide a source of encouragement for children to reread without prompting on future reading tasks.

Key Terms

Self-management- the process of students monitoring their progress through graphing of specific skills.

Comprehension- the ability to take meaning away from orally or silently read text, "an active process that requires an intentional and thoughtful interaction between the reader and the text" (National Institute of Child Health and Human Development. (2000).

Fluency – oral reading with appropriate speed and accuracy, reading with expression

Decoding- the ability to use phonemes to pronounce the written words, using letter-sound correspondence.

Implications

Reading is one of the most important skills that an individual can learn during their lifetime. The ability to read with comprehension impacts every other school subject. Children with reading difficulties experience a wide range of problems. Some

have trouble decoding, others with fluency. Both of these affect comprehension. There are many strategies to address decoding deficiencies. Some programs focus solely on decoding and do not attend to comprehension skills. Once children have become proficient at decoding and reading fluently, they must attend to comprehension. This is where many students falter. Cultivating self-monitoring, successful readers is a major goal for educators. If children are able to see concrete evidence of the benefits of rereading, it may foster a more active comprehension of text.

Summary

Many students have difficulty deeply comprehending material that has been read. Some students experience this because they have limited decoding skills and therefore do not read the text fluently. The meaning is lost in the struggle to accurately decode. Others, while decoding is not an issue, still have limited comprehension of the text they read. This study will examine the effects of rereading as a strategy to improve comprehension with students in the third grade. It will also examine whether or not the students become more inclined to reread without prompting as a result of self-management of their comprehension through graphing their results on various passages.

CHAPTER 2

Review of Literature

When considering any aspect of reading, one must look at the components that make up successful reading. The National Reading Panel (2000) identified these components as the key areas for successful reading: phonemic awareness, phonics, fluency, vocabulary, and comprehension. These are all critical to becoming a successful reader.

Phonemic Awareness and Phonics

Using phonemic awareness and phonics, students are able to decode words in their printed form. As students progress they are able to better decode unknown words using the basic rules for how sounds are connected to letters. In the early years, students may need to sound out many of the words encountered on the page. Much intervention has been concerned with the phonemic awareness and phonics aspects of reading, especially for children with learning disabilities. Once a foundation of phonemic awareness and phonics is in place, students can begin to develop fluency.

Fluency

Fluency is the ability to decode and recognize words on sight with fluidity. This results in rapid and accurate reading of a passage. When readers are fluent, their oral reading sounds like natural speaking. They read with intonation and expression. Non-fluent readers sound choppy and their reading is laborious. Repeated reading and guided repeated oral reading has been recommended by The National Institute of Child Health and Human Development (NICHD, 2000) as a means of improving overall reading achievement. It has been argued that fluent readers may comprehend better than non-

fluent readers because they are able to free up cognitive processes for comprehending instead of utilizing all of their resources on decoding (Allor & Chard, 2001). In a meta-analysis the National Reading Panel concluded that evidence was sufficient to support the use of repeated reading procedures (NPR, 2000). It has been posited that the energy used for decoding nearly every word in a passage leaves little energy for making meaning of the words being decoded. Regardless if this is true for some or all readers, the skill of comprehension remains an issue for many readers, even some who are fluent readers. Some readers are known as what has been termed "word callers" (Hamilton and Shinn, 2003). This means that they are fluent and able to decode with accuracy and efficiency, but when asked, have little recollection of what the passage was about.

Comprehension

Comprehension is the ability to take away meaning from the text. It involves complex processes of interacting with the text through working memory, inferencing, and predicting (Chard, et.al., 2009). As children become older, more of the information they will acquire in formal schooling will rely on the ability to effectively comprehend and respond to written material. This makes it a critical component of a child's early education. Without comprehension, reading is meaningless. Comprehension is a demanding task, which involves working memory, so that text, which has been decoded, can be accessed to process and arrive at a meaningful conclusion through inferencing and synthesizing existing knowledge with newly acquired knowledge.

Gracia-Madruga, Elosua, Gil, Gomez-Veiga, Vila, Orjales, Contreras, Rodriguez, Melero, & Duque, (2013) focused their study on the Working Memory (WM) and executive process of comprehension. They posit that executive control aids in

maintaining attentional control, which is needed to filter interfering information. They discuss comprehension as requiring the reader to be able to simultaneously extract and construct meaning. Gracia-Madruga, et. al. state that the relations between WM span and reading comprehension has been well established and that students with high WM scores typically display high reading comprehension scores. Inversely, low WM scores typically correlate with low reading comprehension scores. They also maintain that even after controlling for phonological awareness and rapid naming, that WM still plays a critical role in reading comprehension.

Many studies have been conducted to determine comprehension outcomes of children under various strategies. Much research has been centered around fluency and its impact on reading success. It has been stated that the fluent reader can focus on comprehension but the non-fluent reader cannot go back and forth between focusing attention on the two processes of word identification and comprehension (Allor and Chard, 2011).

The findings of a compensatory-encoding theory study found that there are many ways that students may compensate for fluency in order to improve comprehension (Walczyk and Griffith-Ross, 2007). Compensatory-encoding theory involves the strategies and tools readers use to compensate for difficulties with reading. The purpose of the study was to determine how important reading fluency is for comprehension. The authors cited several ways in which students compensate for comprehension inadequacies. These compensatory approaches included: slowing down the rate of reading, pausing, look back, read aloud, sounding out or analogizing to known sight words or contextual guessing, jump over, and reread text. Of interest for the present

study is the rereading of text. Walczyk et al (2004) defined rereading as going back and reprocessing four or more words. Having these compensations available will help readers comprehend written material more effectively. Walcyzk et al (2004) also posited that some comprehension difficulties may arise from "word callers" that are so fluent that they are not cognitively engaged in the text, allowing their minds to wander. This would also pose a problem of comprehension for fluent readers.

Repeated Reading

Chard, Ketterlin-Geller, Baker, Doabler, & Apichatabutra (2009) reviewed several theoretical frameworks of fluency's role in proficient reading. They note that Perfetti's (1985) verbal efficiency theory finds that word identification as a lower level process must reach a certain threshold before one can continue to higher level processes (comprehension) Once proficient, the two can be carried out simultaneously. Perfetti's theory indicates that practice and repetition can reduce the demands on the reader. They also reviewed Logan' "instance theory of automatization" (1988) which suggests automaticity and fluency are reliant on memory retrieval. This leads to the position that the strength of the memory is increased with repetition of task. These two theories together both suggest that repeated reading would enhance fluency, memory, and therefore comprehension.

The strategy of repeated reading, or re-reading, has been examined quite extensively. For example, Bossert and Schwantes (1995) investigated comprehension monitoring and training children to use rereading to improve comprehension. They posit that comprehension monitoring involves two phases: the evaluation and the regulation. The evaluation phase requires the reader to recognize breakdowns in their comprehension

and the regulation phase is the fixing up phase, or looking back. The subjects were 32 fourth grade students from a middle class elementary school in a small rural community. There was a training group and a control group, each consisting of 16 students. The training group received metacognitive training and the use of guided-instructional prompts. The prompts were provided to the training group when a wrong answer was given. The prompts were presented in the following order: 1) Is the answer mentioned in the story, 2) Do you remember reading about this, and 3) Would it help to look back go the story? They participated in two 30-minute sessions approximately five days apart. Both groups read stories and answered comprehension questions, all presented on a computer, which enabled them to move forward and backward through the text. Three multiple-choice questions were presented on the computer screen following the story. They found that students were more inclined to look back as the questions became more difficult. The subjects in the training group were found to utilize the look-back strategy significantly more often than the control group, even after several days and when the prompts were no longer present. Also, the likelihood of answering the question correctly was significantly greater when look-backs occurred.

Therrien (2004) conducted a meta-analysis on fluency and comprehension gains with repeated readings for both nondisabled students and students with learning disabilities. Therrien included studies published after 1977 and before June of 2001, were experimental and quantitative, and used school aged children with ages 5-18 years of age. He found when students reread a previously read passage their fluency and comprehension increases. The effect size was .83, SE = .066 for fluency increases and ES = .67, SE = .080 for comprehension effect size. Therrien also found that transfer

results, or students' ability to fluently read new material and comprehension is after reading other material, still proved beneficial.

Repeated reading was studied by Nelson, Alber, and Gordy (2004) with second grade students with disabilities. Four students were included in the study. Three of the students were diagnosed with learning disabilities and one student was diagnosed with ADHD. Students read passages for five minutes with corrections by the teacher. In the baseline, the teacher corrected any miscues immediately, but did not require the student to orally repeat the correction. The teacher then had the students reread the text, timing the students for one minute and recording the number of errors per minute. In the next phase, the teacher again listened to the student read for five minutes, correcting any miscues. This time the teacher required the students to orally repeat the corrected miscues. The teacher then reviewed the words the students had errors on during the first reading. Again, she recorded the reading for one minute and recorded the number of errors per minute. Next, the teacher used the error corrections again but only for three minutes, to allow for three minutes for three repeated readings of one minute each. Finally, the students read previously read material from the baseline, with three one-minute recordings of errors per minute. Their results demonstrated that he average reading rates improved substantially. The number of errors per minute also decreased for each of the four students. They found their results supported previous research for increased fluency with repeated readings.

Musti-Rao, Hawkins, and Barkley (2009) studied the effects of repeated reading on oral fluency for fourth grade students in an urban district. Based on their belief that struggling readers need multiple opportunities to practice reading texts at their

instructional level, they investigated oral reading fluency with peer-mediated repeated readings. The participants included in the study were from a fourth grade in a Midwest urban charter school. Participants were 12 African American students ranging from 9 years, 3 months to 12 years, 5 months. Based upon the administration of the Dynamic Indicators of Basic Early Literacy Skills (DIBELS; Good & Kaminski, 2002), the 12 students were identified as needing intensive intervention to reach fourth grade benchmarks. Five were boys and seven were girls. Six of the students were identified as having a disability and received special education services. Three students were classified as Specific Learning Disability (SLD), one with Other Health Impairment (OHI), one with Cognitive Disability (CD), and one with Severe Emotional Disability (SED). A baseline was taken for all 12 students in which they read silently for 30 minutes, then a DIBLES Oral Reading fluency (DORF) was administered. This was done once per week. Then the students were trained to for the role of reader and listener of the correction procedure. Next, the teachers were trained as to specific procedures for the intervention. Students participated in paired repeated readings. They had 120-150 word passages from their grade level language arts book. They read from Charlotte's Web (White, 1952). Each student was provided with a repeated reading folder, which contained the reading passage, copy of passage with word count, good tutor card, correction card, and reading log. Students took turns reading the passage for 10 minutes and then they individually read the practiced passage from 1 minute. The number of words correctly read was recorded. The results indicated an increase in fluency rates for all students. The overall data for the intervention suggested a mean percentage change of 39.8% for the group. A moderate to large effect size was estimated for students' oral

reading fluency. A social validity piece was administered through a Likert type scale, which revealed that the fourth grade teacher viewed the intervention favorably and as easy to implement. The targeted students revealed that they enjoyed the repeated reading sessions and felt as though they were learning important skills. One male student shared that he "took more time to figure out words" that he didn't know when using the repeated reading strategy. Overall, the researchers found the reading fluency rates to be improved with repeated reading.

Lo, Cooke, and Starling, (2011) investigate the reading fluency gains by repeated reading in three second-grade student that were at risk for reading failure. They integrated isolated word reading practice, unison reading, error correction, and performance cueing and feedback procedures. The instrument was from the DORF (Good, et al., 2002). Participants were three, second grade students, meeting four criteria for participation. They had to have either completed or tested out of *Early Reading Tutor* (Gibbs, Campbell, Helf, and Cook, 2007), scored at least 50 correct sounds per minute on DIBELS Nonsense Word Fluency, have a trend line for DORF weekly progress monitoring that was suggestive of not attained benchmark level by the end of second grade, and had to not be involved in and oral reading fluency interventions above the current core reading program. There was one African American female, one African American male, and one Hispanic female. The tutors first showed the students their performance graph and encouraged them to beat their own scores. Next, the tutor would preview the difficult words in the passage with the student and they would need to repeat the word. Then the tutor had the student read from one minute without assistance. Errors were recorded and corrected. The tutor shared with the student the number of correctly

read words and the error corrections made. The student would repeat the word as the tutor showed and said each miscue that was made. The missed words were made into flashcards for the student to practice in isolation. Next, the tutor and student read aloud in unison, at a rate slightly faster than the student's current rate. The teacher was sure to use proper expression, as an accurate model for the students. The tutor cued the student to read as fluently as possible by noting the words correct per minute from the previous reading, and reminded the student that she was trying to beat that score. Finally, the tutor had the student read the passage independently for one minute, while recording the errors and correct words per minute and graphing the results. Results indicated an improvement in a reading fluency for all three participants. All three participants also moved closer to the grade level benchmark criterion.

O'Connor, White, and Swanson, (2007) evaluated two methods to improve the reading fluency of children considered struggling readers. They included poor readers in the second grade, 17 of which had learning disabilities and 20, which did not have learning disabilities. They compared repeated reading with continuous reading of various texts for equivalent lengths of time. The hypothesis was that the students in the continuous reading group would increase their vocabulary and comprehension more than the repeated reading groups. They wanted to find out if practice of 15 minutes for 3 days a week, for 14 weeks of reading aloud would improve fluency. They also investigated whether second or fourth graders would respond differently. They wanted to find growth effects in word identification, vocabulary and comprehension. Criteria were set to determine students who qualified as struggling readers in the second and fourth grade classes. The second graders needed to read between 12 to 45 words per minute (wpm)

and the fourth graders needed to read between 20 to 80 wmp on their respective grade level materials. They also had to have a standard score of higher than 69 on the Peabody Picture Vocabulary Test-III (PPVT-III, Dunn, Dunn, & Dunn, 1997). Of the 48 students selected, 50% were European American, 29% Hispanic or Mexican American, 18% African American, and 3% other. This was representative of the school population. After attrition due to various causes, 37 students continued through to the end of the study. Sixteen of the students were classified as having learning disabilities. Of these sixteen, 14 were fourth graders. The remaining two students with learning disabilities were in the fourth grade, one make and one female. The two interventions consisted of either one-one oral repeated reading (RR) or continuous oral reading (CR). There were 15 minutes of oral reading to an adult 3 times per week for 14 weeks for both groups. The CR read from the same book as the RR, but did not repeat the same pages of reading. The control groups did not receive interventions. After the intervention, several assessments were conducted. The PPVT-III was used to measure receptive vocabulary. The Woodcock Reading Mastery Tests-NU (WRMT-NU; Woodcock, 1998) measured identifying words in isolation in the Word Identification, phonics application in the Word Attack, and comprehension was measured in the Passage Comprehension subtest. The Gray Oral Reading Tests, Fourth Edition (GORT4, Wiederholt & Bryant, 2001) was used to measure reading accuracy, rate, and comprehension. Passages were read which contained 50 to 200 words. Students also read aloud without being asked comprehension questions to get a measure of rate if they didn't have to worry about comprehension. This was measured by the Analytic Reading Inventory (ARI, Woods and Moe, 1999). Overall, in the 14 weeks, students improved in all groups in levels of performance.

Improvements were made in reading rate, word identification and reading comprehension. All of the learning disabilities students made gains of at least 10 words per minutes.

Repeated reading has also been generally accepted as an intervention for students with disabilities (Chard, et. al., 2009). For example, Saviano and Hatton investigated the used of repeated reading to improve reading speed and comprehension in students with visual impairments (Saviano and Hatton, 2013). The participants were three students from grade 3-6 with visual impairments and experiencing reading difficulties. They used repeated readings to measure fluency and comprehension. Dolch Classic Books (Dolch & Dolch, 1961) were used with a 16-point Arial font. A digital voice recorder and stopwatch was used to accurately record the students' performance. Oral reading rate, error rate, and comprehension were evaluated. Comprehension was defined as the number of content words that the student provided after the readings, including proper nouns, common nouns, adjectives, adverbs, and verbs. The procedure included prebaseline, baseline, intervention, and maintenance phases. A social validity piece consisted of 11 questions regarding the participants' attitudes towards reading. Two of the three participants increased their scores positively regarding reading after the study. They went from 9 to 11 questions answered positively, and 5 to 11 of the questions being answered positively, respectively. The third participant remained constant from the beginning to the end of the study, answering all 11 questions positively at prebaseline and post-intervention. There was a functional relation between repeated readings and comprehension for all three participants. Results indicated a functional relation between repeated reading and oral reading rate for two of the three participants. It should be noted

that the third participant also had a diagnosis of Attention Deficit Hyperactivity Disorder (ADHD). Although this study was limited to students with visual impairments, the intervention would also be able to be replicated on students without visual impairments.

Chard, Vaugh, & Tyler (2002) conducted a synthesis of the research of interventions for building fluency with elementary students with learning disabilities. They identified 24 studies having to do with interventions for students with learning disabilities within a twenty-five year period of their research. The 24 studies included 8 multiple group, 5 single group, and 11 case studies or single-subjects designs. Through their careful analysis and criteria for inclusion, their general findings were that repeated readings for children with learning disabilities led to an improvement in reading rate, accuracy, and comprehension. They state that the studies and the theories that support them demonstrate that "rapid processing of print by reading target passages more than once is often effective as a means to improve accuracy and speed and ultimately leads to better understanding of text" (p. 402). Even though the focus of the synthesis was not comprehension, they generally found that gains in fluency resulted in gains in comprehension.

Chard, et. al., (2009) analyzed single-subject research studies as well as experimental and quasi-experimental research studies across rigorous research criterion to determine if repeated reading could be deemed as a "research-based" practice to improve reading. They focused their study on this since repeated reading had been generally accepted as a practice justified for use in increasing reading performance. Chard, et. al. applied stringent quality standards to the studies they analyzed. Their findings suggest that repeated reading does not meet "evidence-based" practice criterion

as based upon the standards set forth by Horner, et. al (2005) and Gersten, et. al., (2005). Despite their conclusions that they are not able to label repeated reading as "evidence-based", they are very reluctant to suggest the cessation of repeated readings as a viable teacher practice. They hesitate since repeated readings are such a logical practice for developing fluency, especially for those lacking in fluency. Secondly, even though many of the studies they reviewed did not meet their specific criteria to be included, the effect size published in meta-analyses that they reviewed are suggestive of positive outcomes with repeated reading practices. Chard, et. al, (2009) also provide many possible reasons for the unfavorable results of the study, including the low number of studies that met their criteria for inclusion.

Kostewicz, (2012) views practice in reading as synonymous with the many other skills and activities that we practice on a regular basis to improve our performance. He cites practice in athletes, actors, performers, and musicians. We take for granted that in order to become fluid in the performances of these arts, one must spend countless hours repeating the same movements, lines in a play, or chords in a song to excel. Not only do we practice these activities, we critique ourselves in the process. Kostewicz posits that reading requires the same "systematic, deliberate" practice. Parents spend countless hours and dollars enrolling and transporting their children into soccer camps and tournaments, yet we do not expend the same effort into such practice with reading skills, especially in the classroom setting. Kostewicz outlined building fluency through repeated readings by discussing different aspects of rereading. He discussed several implementation concerns including length of time, reading process, error correction, performance feedback and progress monitoring, and reading goals. The length of time

should be thoughtfully planned according to the amount of modifications. Most research concluded that repeated reading is best suited for 5 to 10 minutes intervals with a one-minute assessment. The reading process is whether students should read out loud to themselves or to the teacher. Reading to the teacher requires more time from the teacher, but is more effective since many students are not efficient at determining their own errors. Students who have the teacher available for corrections experience greater gains. Error correction is critical so that the student is not practicing and repeating inaccurate reading. This can be done through per reading as well. Performance feedback and progress monitoring give students a chance to work on current and future goals. This can be accomplished through a simple chart or graph. Setting reading goals give a purpose to the deliberate practice. Kostewicz concludes that through these practices repeated reading can be an easy and effective means to increase fluency.

Self-regulation

Several studies have investigated the usefulness of having children monitor their own learning. Some of these studies have focused on the self-monitoring of attention, self-monitoring of behavior, and the self-monitoring of academic progress. It has generally been accepted that self-monitoring or self-regulation is beneficial. Self-monitoring encourages taking responsibility for one's learning which is a step towards independence.

Rafferty and Raimondi (2009) examined the effects of self-monitoring of attention as compared with self-monitoring of academic performance in emotionally disturbed children. The subjects were three minority students, identified with emotional disturbance, each in third grade. The study was carried out in their regularly scheduled

15 minute practice period of preforming mathematical calculations. In the first phase of the study, the students were asked to self assess their attention at five-minute intervals, as indicated by a buzzer, within a fifteen minute time period of math practice. In the second phase, the students calculated their performance at the end of the fifteen minutes session by evaluating how many problems they had completed and how many problems they had correct. In the third portion of the study, the students were asked which method of self-monitoring they preferred. All of the participants concluded that they preferred to monitor their academic performance to monitoring their attention. All three target students improved in their productivity and accuracy more so on the progress monitoring condition than that of the attention monitoring condition. The students stated that they preferred to monitor their progress over attention because "you learn better and get higher and higher" and "it helped me to learn about how I did. I wanted to get higher and higher". The researchers concluded that focusing emotionally disturbed students on their academic achievement may be more beneficial than focusing solely on attention and behaviors. If they are focused on and motivated for the academic task, that will assist in addressing the attention and behavior concerns. Although this was a math task, it still focused students' motivation on their own academic performance.

Falkenberg and Barbetta (2013) used a self-monitoring package for completing homework and accuracy with students with disabilities. Their subjects were four, fourth grade students with disabilities in an inclusive general education classroom. They analyzed both the completion of the homework and the accuracy of the homework. They combined self-monitoring with brief conferencing with the special education teacher. Students filled out a KidTools self-monitoring sheet by coloring in a smiley or sad face,

regarding if they completed and returned their homework each day. Overall, the intervention proved to be effective in improving the completion and the accuracy of homework.

Summary

The purpose of the current study is to combine the theories of fluency, comprehension, and self-monitoring into one intervention for the purpose of improving student outcomes. It is proposed to investigate whether repeated reading of a text will increase fluency, enhance memory and therefore comprehension through a second exposure to the text, and if the motivational aspect of self- regulation through graphing will result in increased comprehension. Many studies have illustrated that repeated reading increases fluency (Chard, Vaughn, & Tyler, 2002). Increased fluency has been linked with freeing up cognitive resources to allow the reader to better concentrate on comprehending the material. Since studies have shown an increase in motivation for academic performance across various areas through self-management and self-regulation (Sutherland & Synder, 2007), this study will attempt to duplicate that motivation through self-management of reading fluency and comprehension when repeated reading is utilized. Also of interest is whether students that have been successful in increasing their performance through repeated readings would be more inclined to continue the practice on their own as a strategy to improve comprehension scores.

CHAPTER 3

Methodology

Setting and Participants

In this study, the participants were six third grade students in an urban, South Jersey school district. The school building houses approximately 300 students. There are three kindergartens, two 1st grades, two 2nd grades, two 3rd grade, two 4th grades, two 5th grades, two 6th grades, one 7th grade, and one 8th grade class. It is a brick one story building set amidst large fields and two low-income housing projects, in which the majority of the student population reside. The unemployment rate in the community is high and the community experiences a high crime rate.

The district carries a District Grouping Factor of A. District Grouping Factors (DGFs) were created in 1975 to compare student performance on statewide assessments. These DGFs allow students to be compared with other students that were from demographically similar school districts. They were also a large part of determining which districts were classified as Abbott districts, which would entitle districts to parity aid. The DFGs give a relative measure of the socioeconomic status of the community. DFGs are calculated using the six following variables: percent of adults with no high school diploma, percent of adults with some college education, occupational status, unemployment rate, percent of individuals in poverty, median family income. The DFGs range from A, B, CD, DE, FG, GH, I, J. DFGs Districts labeled as "A" are the lowest, with J being the highest.

The district consists of a preschool for three and four year olds, six K-8 schools, a high school, and a choice school which students attend classes for extended school year, including an extended day, half-day Saturdays, and classes continue through mid-July. According to Public Schools K12 Website, 76% of students in the particular school building in which the study took place, are eligible for free lunch and breakfast and 7% are eligible for reduced breakfast and lunch. The ethnic breakdown of the school is 45% African American, 34% Hispanic, 10% Dual Race, 9% Caucasian, and 2% Other.

All of the students were members of the same third grade class. The class is an inclusion classroom, which includes four students who receive special educational services and are included all day in the third grade class. Two additional students have been referred to Intervention and Referral Services (I&RS) for possible Child Study Team evaluations due to significant difficulties in reading. Study participants were chosen due to reading below grade level expectations as measured on the Fountas and Pinnell Benchmark Assessment System (BAS) 2nd Edition. All students were selected based upon their risk of not meeting grade level benchmark expectations for reading accuracy and comprehension based upon required district –wide administration of the Fountas and Pinnell BAS.

Participant 1. VH is a third grade African American male identified as having a behavioral disorder. He was in a self-contained class for first and second grades after being identified while attending regular education kindergarten. He had several aggressive incidents in kindergarten. During first grade he had to be restrained several times in the self-contained behavioral disorders classroom. In second grade he had no restraints and marked improvement in his behavior. He has shown positive growth in the

third grade inclusion class. He was reading near grade level, but struggled with comprehension. His work is modified to allow for additional time and to allow for items to be read aloud for him. On weekly and unit tests in reading, math, science, and social studies, distractors are minimized on multiple choice items.

Participant 2. JA is a third grade African American female classified as having a Specific Learning Disability (SLD). She is reading below grade level expectations as measured by the Fountas and Pinnell BAS. Her reading level is a first grade level (I). She has difficulty sleeping at night and is often tired at school. She lives with her grandmother who works two jobs. JA reads at a very slow and labored rate. Her work is modified to allow for additional time and to allow for items to be read aloud for her. On weekly and unit tests in reading, math, science, and social studies, distractors are minimized on multiple choice items.

Participant 3. MS is a third grade Hispanic (Mexican American) male who has been referred to Intervention and Referral Services (I & RS) for speech and reading concerns. He was reading on a first grade level (H) for accuracy and comprehension according to his Fountas and Pinnell scores. He has difficulty coming up with the correct word in English. His father declined bilingual services, stating that he wanted his son to learn English faster. He completes his homework regularly and participates in class activities.

Participant 4. MT is a third grade Native American male who has been referred to I & RS for math and reading concerns. He was reading on a first grade level (E) for accuracy and comprehension according to his Fountas and Pinnell scores. He has

been referred to the I & RS Team where it was determined that he will be evaluated with a full Child Study Team evaluation.

Participant 5. JC is a third grade African American male with a classification of "Other Health Impairment" of Attention Deficit Hyperactivity Disorder. He is reading on a kindergarten level (Fountas and Pinnell level B). He struggles with decoding, fluency, and sight word recognition. His work is modified to allow for additional time and to allow for items to be read aloud for him. On weekly and unit tests in reading, math, science, and social studies, distractors are minimized on multiple choice items.

Participant 6. NM is a third grade African American male classified as Communication Impaired. Hi is reading on a kindergarten level (Fountas and Pinnell Level C). He struggles to find common words when speaking, often referring to the word as "the thingy". This is NM's second year in an inclusion classroom. He was in a self-contained Language and Learning Disabilities in first grade.

Procedure

The intervention took place in a third grade inclusion education classroom during reading instruction from 9:30 am to 10:30 am. The regular education teacher and the special education teacher saw groups of children for guided reading on a rotation basis each day during the intervention, as the usual proactive during the reading block. Intervention took place during this time, with the regular education teacher pulling each participant individually to a small rectangular table with four chairs.

For each of the three phases, students were in a third grade inclusion classroom for their regularly scheduled reading block. The teacher and each individual student met at the teacher's reading table. Each phase occurred at the same time every

each day. During the baseline phase, students read passages from the Critical Reaming Inventory (CRI), (Applegate, Quinn, and Applegate, 2008). In this phase students were presented with a reading passage on their respective grade level and asked to orally read the passage. The teacher noted the accuracy and rate (fluency). Upon finishing the text, the students were asked to retell the text, and given a score as indicated by a retelling rubric provided by the publisher of the CRI. Comprehension questions were asked, also provided by the publishers of the CRI. During the second phase, the teacher explained to the students that sometimes when we read something more than once, we get better, faster, and remember more than we did the first time. The teacher explained that the students would again be reading a passage, but this time, they would also read it a second time to compare how they did when they reread the passage. The teacher recorded the rate, accuracy and comprehension for both the first and second readings. For this phase, five passages from the Jerry Johns Basic Reading Inventory (BRI) were used at the appropriate grade level (Johns, 2012). The teacher discussed their performance with them as it pertained to the comparison of oral reading accuracy, fluency (words correct/minute), and the comprehension scores with the first and repeated readings of the passage. Finally, during the third phase of the study, the students again were presented with three passages on their respective grade level. This time the passages were also taken from the Critical Reading Inventory. Students were presented with three additional passages and asked to read orally. Students themselves (with the assistance of the teacher) recorded their accuracy, fluency, and comprehension scores. They were then asked if they would like to reread the passage to try to improve their first set of scores. Students then reread the passage and again recorded their progress.

Variables

The independent variable in the study was the intervention of repeated reading and self-management. Students utilized pencils and a graph to record oral words correct per minute and comprehension questions correct per each reading of the passage.

The dependent variable in the study was the student's academic performance regarding their correct words per minute and their comprehension scores.

Experimental Design

This study consisted of three phases. Phase A consisted of baseline data in which the student read the passage and answered questions. Phase B consisted of students reading the passage and recording their correct words per minute on the graph, plus answering the questions and recording their scores on the graph for comprehension as well. They then repeated the passage and once again recorded their words correct per minute as well as comprehension scores. Phase C consisted of the students reading a passage and having the choice of whether or not to reread before answering the comprehension questions.

CHAPTER 4

Results

Summary

In this single subject design, the effects of rereading to increase fluency and comprehension were examined with six special needs students from a third grade inclusion setting classroom were examined. The research questions to be answered were:

1. Will the use of a self-monitoring procedure utilizing graphing and re-reading improve the reading fluency and reading comprehension of third grade students with reading difficulties?

2. What effect will rereading have on reading fluency?

3. Will students begin to reread without prompting as a result of self-management of comprehension scores through graphing?

The students were assessed in the beginning of the year using the *Fountas and Pinnell Benchmark Assessment System, 2nd Edition* to obtain their reading levels. This assessment measure evaluates accuracy, comprehension, and fluency with leveled texts. The levels obtained from this measure were used to determine which level passages participants would use for *the Critical Reading Inventory* and the *Jerry Johns Basic Reading Inventory* for the baseline, intervention, and final phases of this study.

Group Results

Table 1 shows the words per minute and comprehension results for each of the six participants. Additionally, the table shows the mean scores for the group as a whole.

Table 1. *Baseline, Intervention, Post-Intervention Fluency and Comprehension Results*

Participant	FLUENCY (words per minute)				COMPREHENSION (percentage)				Difference Between Baseline and Post-Intervention	
	Baseline	*Intervention Phase*		*Post-Intervention*	*Baseline*	*Intervention Phase*		*Post-Intervention*		
	1st read	1st read	2nd read	2nd read	1st read	1st read	2nd read	2nd read	*Fluency (words per minute)*	*Comprehension (percentage)*
1	85	112	122	124	29	48	73	77	39 (45.8%)	48
2	37	36	46	51	40	82	97	85	14 (37.8%)	45
3	87	66	86	90	36	70	90	84	3 (3.4%)	48
4	48	61	85	88	46	66	94	73	40 (83.3%)	27
5	20	20	27	34	46	70	90	83	14 (70%)	37
6	32	33	65	71	44	72	96	94	39 (120%)	50
MEAN	51.5	54.7	71.8	76.3	40.2	68	90	82.7	24.8 (48.2%)	42.5

The Baseline was taken on leveled passages for each of the six participants. All six participants read three passages of the appropriate level each, one time only. The fluency was calculated in words per minute and the comprehension was calculated with a percentage score. From the three passages, a baseline fluency and comprehension was established by calculating the mean. During the Intervention Phase, each participant read five passages on their appropriate level. This time, participants read each passage twice, graphing their words per minute and comprehension for each passage. The five passages resulted in mean score for words per minute and comprehension for the first and second readings. Finally, in the Post-Intervention Phase each participant again read three passages, this time they were asked if they wished to reread the passage. All six

participants chose to reread all three passages. A mean was calculated from the three passages after rereading for the words per minute and comprehension scores.

In examining fluency, the results for the overall group showed a Baseline of 51.5 words per minute. During the Intervention Phase, the mean words per minute were 54.7 on the first reading of the passage, and 71.8 on the second reading of the passage. In the Post-Intervention Phase, the overall mean increased to 76.3 words per minute.

The results for the overall groups showed a Baseline of 40.2% in comprehension of the passages read. During the Intervention Phase, the mean comprehension score was 68% on the first reading of the passage, and 90% on the rereading of the passage. In the Post-Intervention Phase, the overall mean increased to 82.7% for comprehension. All six participants improved in their comprehension. The overall mean difference from the Baseline to the Post-Intervention was a 42.5% increase in comprehension with rereading. The three students that made the greater gains in fluency were the three lowest readers according to their *Fountas and Pinnell Benchmark Assessments.* A t-test reveals that the results indicate that the difference between pre and post on was statistically significant ($t = 3.71$, $p < .05$). For comprehension, the differences were also statistically significant, ($t = 11.7$, $p < .001$).

Individual Results

Figure 1 illustrates the results for Participant 1 on the words per minute on the Baseline, Intervention, and Post-Intervention. In the Baseline, Participant 1 read an average of 85 words per minute. During the Intervention Phase, the words per minute averaged 112 for the first readings and 122 for the second readings. In the final Post-Intervention Phase, the words per minute increased to an average of 124 words per

minute. Figure 2 illustrates the results for Participant 1 on the comprehension scores for the Baseline, Intervention, and Post-Intervention. During the Baseline Phase, mean comprehension was 29%. In the Intervention Phase, the mean comprehension score for the first reading was 48%, and 73% for the mean second reading. In the Post-Intervention Phase, the mean score increased to 77% for comprehension of the passages read.

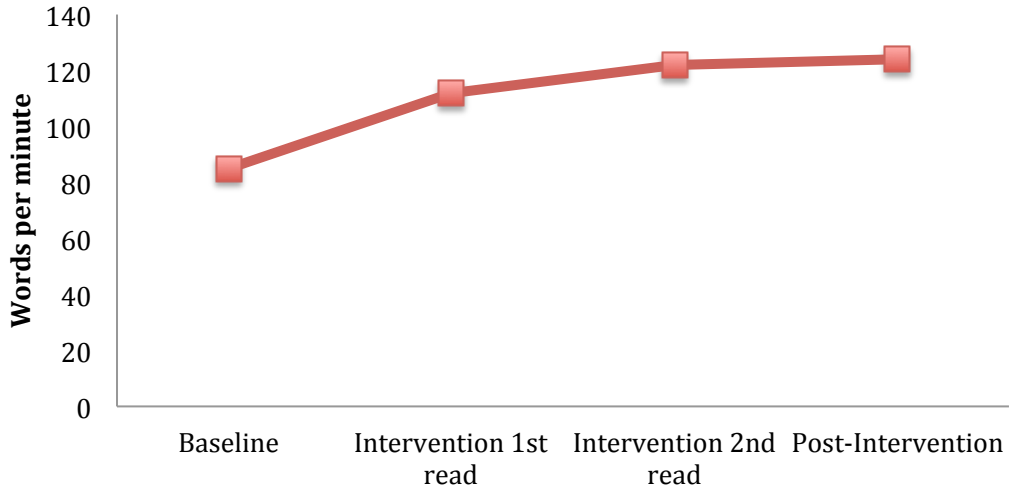

Figure 1. Participant 1 Fluency

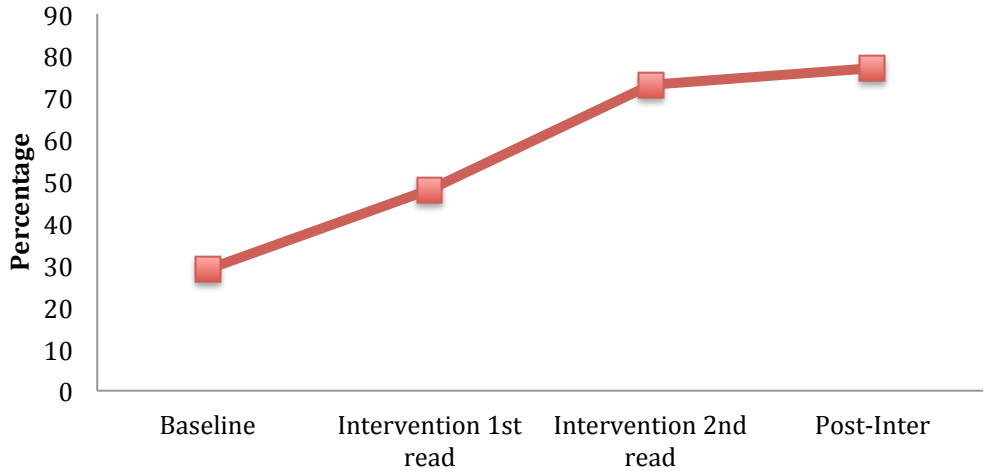

Figure 2. Participant 1 Comprehension

Figure 3 illustrates the results for Participant 2 on the words per minute on the Baseline, Intervention, and Post-Intervention. During the Baseline Phase, Paritipcant 2 read 37 words per minute. In the Intervention Phase, she read an average of 36 words per minute on the first reading and increased to an average of 46 words per minute on the second reading of the passage. By the Post-Intervention Phase, she read and average of 51 words per minute. Figure 4 illustrates the results for Participant 2 on the comprehension scores for the Baseline, Intervention, and Post-Intervention. During the Baseline Phase, she earned an average comprehension score of 40%. In the Intervention Phase, she scored an average of 82% for the first reading and an average of 97% on the second reading of the passages. In the Post-Intervention Phase, Participant 2 scored an average of 85% comprehension of reread passages.

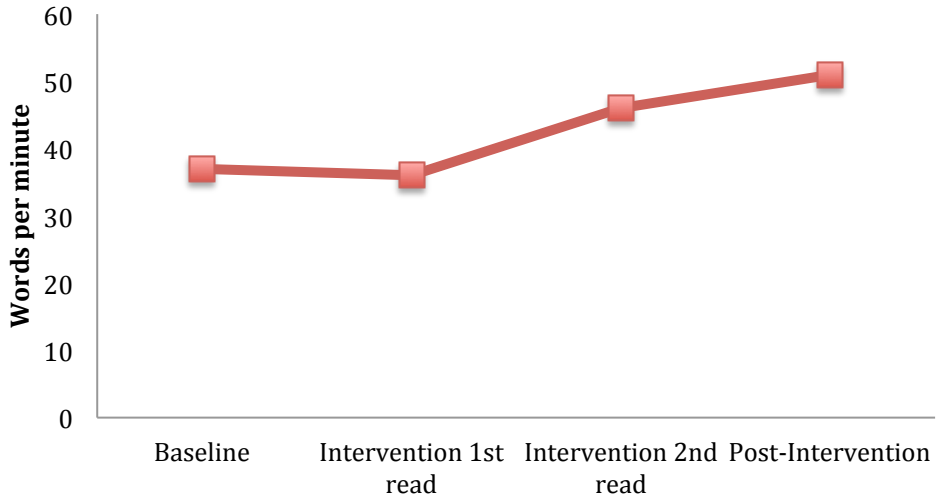

Figure 3. Participant 2 Fluency

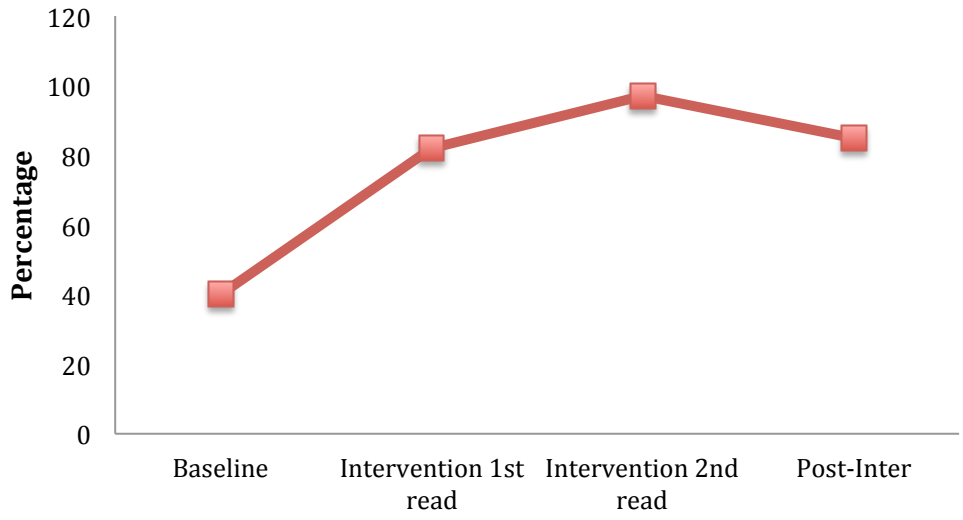

Figure 4. Participant 2 Comprehension

Figure 5 illustrates the results for Participant 3 on the words per minute on the Baseline, Intervention, and Post-Intervention. For the Baseline Phase, Participant 3 read an average of 87 words per minute. During the Intervention Phase, he rad an average of 66 words per minute on the first reading, and increased to an average of 86 words per minute with rereading the passages. For the final Post-Intervention Phase, he read an average of 90 words per minute when rereading the passages for a second time. Figure 6 illustrates the results for Participant 3 on the fluency scores for the Baseline, Intervention, and Post-Intervention. The average comprehension score for the Baseline Phase was 36% with just one reading of the passages. The Intervention Phase resulted in an average score of 70% on the first reading of the passages and 90% average with the rereading of passages. For the Final Post-Intervention Phase, the average comprehension score was 84% with a rereading of the passages.

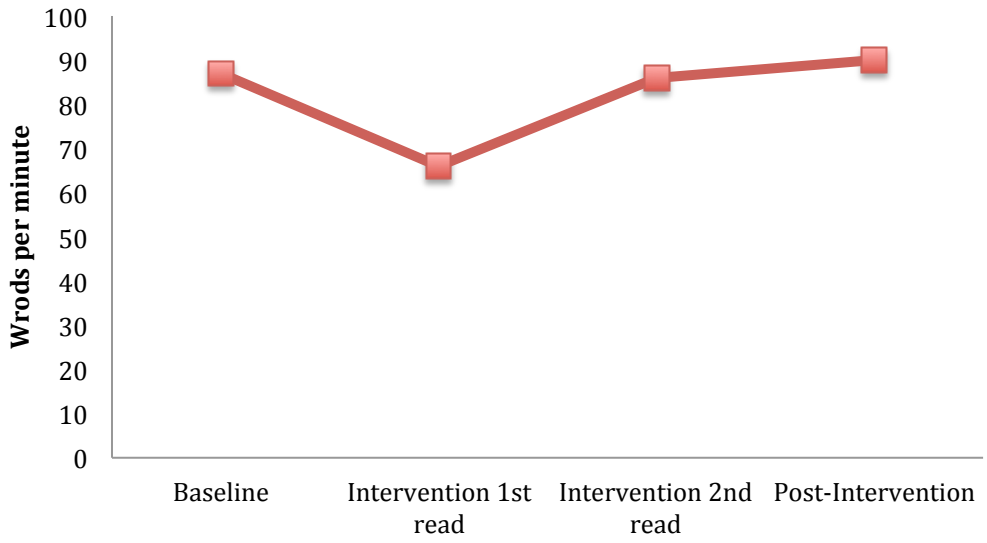

Figure 5. Participant 3 Fluency

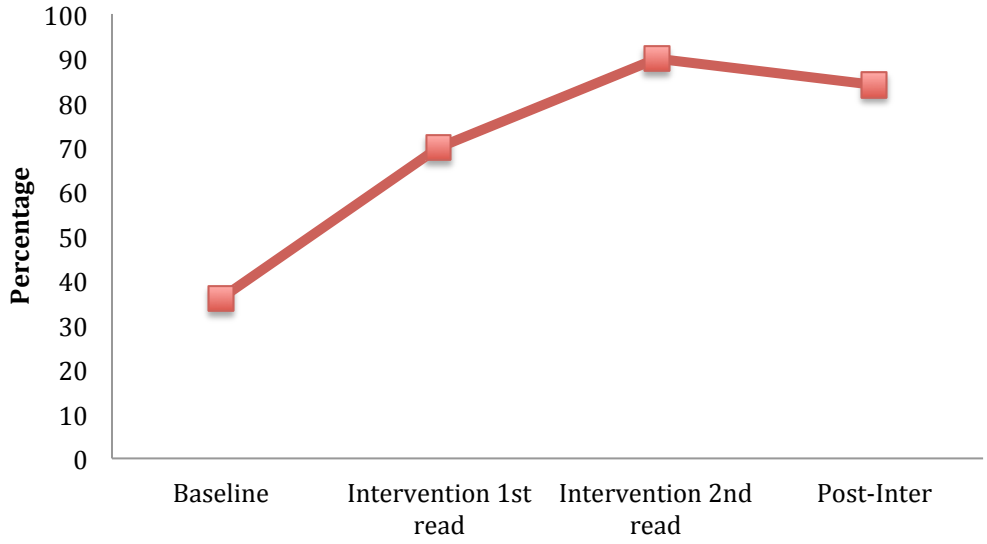

Figure 6. Participant 3 Comprehension

Figure 7 illustrates the results for Participant 4 on the words per minute on the Baseline, Intervention, and Post-Intervention. Words per minute were and average of 48 in the Baseline Phase. With one reading of the passages in the Intervention Phase, the

average words per minute increased to 61. With rereading, the average words per minute increased to 85. In the final Post-Intervention Phase, the average after rereading the passages was 88 words per minute. Figure 7 illustrates the results for Participant 4 on the fluency scores for the Baseline, Intervention, and Post-Intervention. In the Baseline Phase, Participant 4 scored an average of 46% on comprehension with just one reading of the passages. During the Intervention Phase, the comprehension average was 66% with one reading of the passages, and increased to an average of 94% with rereading of the passages. Finally, in the Post-Intervention Phase, the comprehension score decreased to an average of 73% with the rereading of the passages.

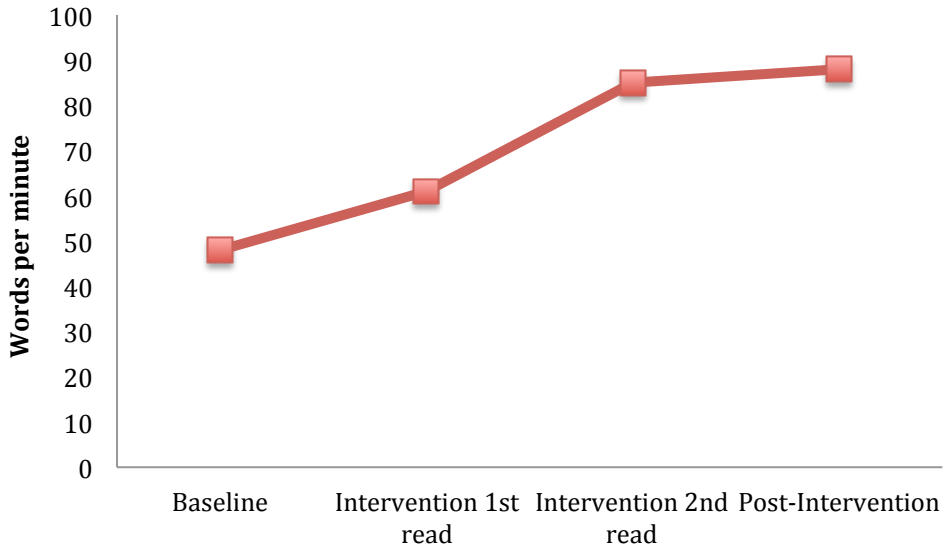

Figure 7. Participant 4 Fluency

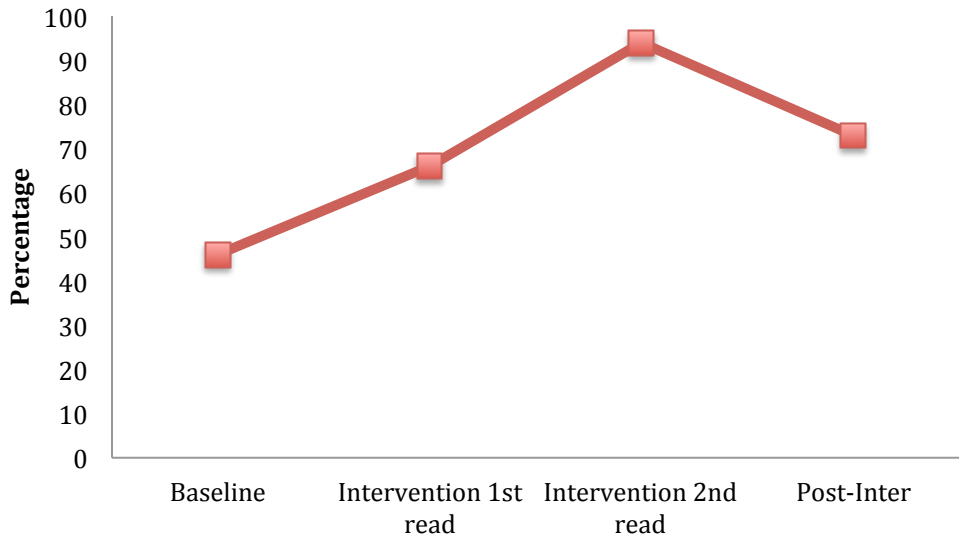

Figure 8. Participant 4 Comprehension

Figure 9 illustrates the results for Participant 5 on the words per minute on the Baseline, Intervention, and Post-Intervention. During the Baseline Phase, Participant 5 read an average of 20 words per minute with just one reading of the passages. In the Intervention Phase, he read an average of 20 words per minute with one reading of the passages and an average of 27 words per minute with repeated reading of the same passages. During the final Post-Intervention Phase, he increased to an average of 34 words per minute with rereading of the passages. Figure 10 illustrates the results for Participant 5 on the fluency scores for the Baseline, Intervention, and Post-Intervention. For the Baseline, Participant 5 scored an average of 46% comprehension with one reading of the passages. In the Intervention Phase he increased to 70% with one reading and 90% with two readings of the passages. In the final Post-Intervention Phase he score an average of 83% with repeated readings on the passages.

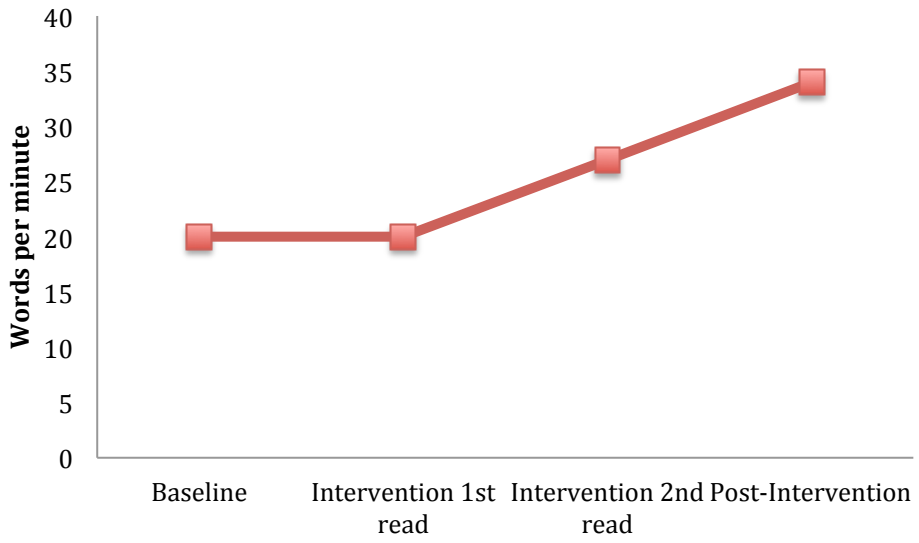

Figure 9. Participant 5 Fluency

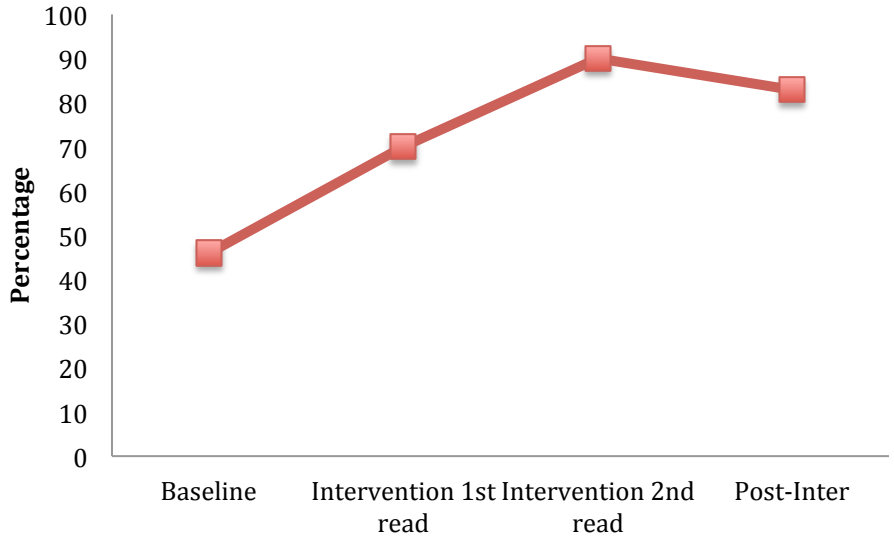

Figure 10. Participant 5 Comprehension

Figure 11 illustrates the results for Participant 6 on the words per minute on the Baseline, Intervention, and Post-Intervention. During the Baseline Phase, Participant 6 read an average of 32 words per minute with one reading of the passages. In the Intervention Phase, he read to an average of 33 words per minute with one reading of the

passages, and increased to 65 words per minute with rereading the passages. In the final Post-Intervention Phase, Participant 6 read an average of 71 words per minute with the rereading of the passages. Figure12 illustrates the results for Participant 6 on the fluency scores for the Baseline, Intervention, and Post-Intervention. During the Baseline, his average comprehension score was 44% with one reading of the passages. For the Intervention Phase, the score was an average of 72% with one reading of the passages and increased to 96% with the reading of the passages. In the Post-Intervention Phase, comprehension scores were an average of 94% with a second reading of the passages.

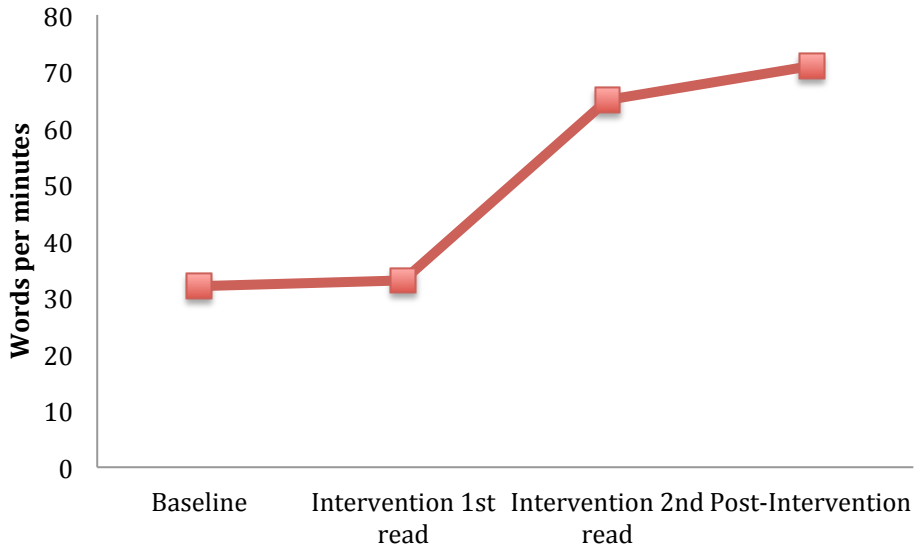

Figure 11. Fluency for Participant 6

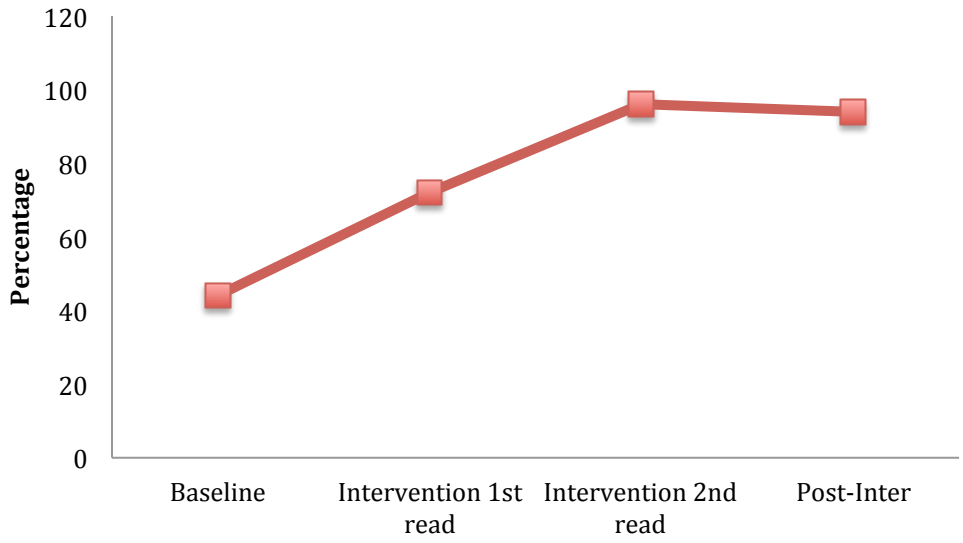

Figure 12. Comprehension for Participant 6

CHAPTER 5

Discussion

Review

This study examined the effects of repeated reading and self-monitoring on fluency and comprehension for students with special needs in a third grade inclusion class in a K-8 school building in an urban community in southern New Jersey. The six participants in the study were students with special needs who were either eligible for special education services, or being evaluated to determine eligibility for special services. The four students eligible for special education services were eligible under the categories of: Specific Learning Disabilities, Other Health Impaired, Behavioral Disorder, and Communication Impaired. The other two students were in the process of being evaluated for Learning Disabilities. All six of the participants were reading below grade level by at least one full grade level as determined by beginning of the year assessments with the district required *Fountas and Pinnell Benchmark Assessment System.*

Rereading and self-monitoring through graphing had positive effects on fluency and comprehension with the special needs students in this study. All six of the participants increased their fluency and comprehension as a result of rereading a passage in all phases of the study. Overall mean scores increased in fluency and comprehension with rereading of the passages. Each student made positive gains in their fluency and comprehension. Expectations for the study were that students would increase their fluency with a second reading, therefore increasing their comprehension. Fluency was measured in words per minute, while comprehension was measured in percentages. The

difference between the gains in fluency compared with the gains in comprehension can be calculated by converting the words per minute gains to a percentages so they are the same units of measure. Three of the participants (Participants 1, 2, and 3) made larger gains in comprehension in the Final Phase (48%, 45%, and 48%, respectively). Three of the participants (Participants 4, 5, and 6) made greater gains in fluency with the rereading (83.3%, 70%, and 120%, respectively

Of the five areas The National Reading Panel (2000) identified as imperative to success in reading (phonemic awareness, phonics, fluency, vocabulary, and comprehension,) two (fluency and comprehension) were examined in this study. The fluency component involves speed, expression, accuracy, and prosody of the reader. Comprehension encompasses the process of actively engaging with, and critically responding to the text that is read. This study focused on the areas of fluency and comprehension along with the self-monitoring of those skills by the participants in the study.

It has been generally accepted that repeated readings is an effective strategy for students with learning disabilities Chard, et. al., 2009). The additional exposure to the words and content increases the memory of the words and reduces the effort required to decode, freeing up cognitive energy for comprehension.

A study comparing the self-monitoring of attention versus academic performance with emotionally disturbed children in the third grade (Rafferty and Raimondi, 2009) concluded that students favored monitoring their academic performance over attention and improved their level work production and accuracy. Another study examined fourth grade students with disabilities and the effects self-monitoring had on the completion and

accuracy of their homework (Falkenberg and Barbetta, 2013). Again, self-monitoring proved an effective intervention for increasing student output.

Utilizing previous studies of rereading as an intervention and self-monitoring as an intervention and combining the two was the intent of this study. Six students with varying special needs from a third grade inclusion class demonstrated that the combination of the two interventions had a positive effect on both fluency and comprehension. Additionally, motivation to read as well as confidence as a reader appeared to increase.

Comparing the results of this study to the above stated research, show similarities in the motivational aspect of self-monitoring. Similarities in student statements were found from this study when compared to the Rafferty and Raimondi (2009) study where both studies participants made claims to the effect of "getting better" or "going higher and higher". Although the students in the Falkenberg and Barbetta study (2013) used smiley and sad faces on a recording chart to indicate whether homework was completed or not, and this study used graphing to indicate progress, both studies found an increase in student motivation for increased performance. The findings of Chard, Vaughn, & Tyler (2002) in their synthesis of research of interventions of building fluency in learning disabled elementary students is in line with the current study, in that both found improved reading rate and comprehension with rereading.

Limitations

During the study, all participants displayed increases in their fluency and comprehension with rereading of passages. The effects were dependent on the students rereading the passages. Their actual reading levels were not measured to see if they

increased, only their reading performance on selected passages. This makes this intervention reliant on the student to reread on their own accord in future situations. The graphing of rereading by the students was a great motivator to their wanting to reread. The absence of this concrete reminder to reread may inhibit some participants from continuing the practice of rereading as needed to increase their comprehension. On-going self-monitoring may help to encourage and remind the participants of the benefits they gained through rereading. Students may need to be taught a specific strategy for when to use rereading. The strategy of rereading may need to be prompted or taught with guided practice and teacher monitoring until it becomes automatic.

In the current study, it was not determined how much of the improvement was due to the self-monitoring versus the rereading, as there was not a control group that did only one or other of the intervention. The sample size of the study was limited to only six third grade special needs students. In order to determine an effect size, a much larger sample would be required. This sample was also restricted to students with special needs from a district which experiences a high level of poverty and crime. The sample did not include students with special needs from various socioeconomic and ethnic backgrounds.

Practical Implications

The participants in this study experienced an intervention with rereading and self-monitoring of fluency and comprehension. Students experienced success with graphing their results, increasing motivation to read, and increasing their scores in both fluency and comprehension. Although this intervention was carried out in one-on-one sessions with the teacher, the effect was carried over to guided reading groups and weekly reading tests, where students voluntarily reread passages for increased understanding. Students

became more aware of their reading ability and when asked after each session what happened when they reread, they were able to articulate that they "got better", "went faster", "remembered more". Students asked the teacher if they could do the graph after the study ended. Continued periodic graphing with students to allow them to self-monitor with rereading is key to the maintaining motivation for the students in this study to utilize the strategy for improving comprehension. Additionally, graphing their progress over time will encourage them to strive to outperform themselves. This will also empower the students to take ownership for their progress and have tangible feedback.

Future Studies

Future research should study the effectiveness of the rereading and self-monitoring of students that are not eligible for special education services, but that may struggle with reading fluency, comprehension, or both. Other studies may focus on the self-monitoring of students' progress to increase their reading levels and what motivation it has on those students. Future research may also include a measure to examine the effects of prompting to reread. Studies may investigate how long students need to be prompted in order for automaticity to occur. In order to increase the sample size, these interventions may be carried out across a classroom setting and with control groups of self-monitor versus not self-monitoring. Future research should include a control group to compare the benefits of self-graphing alone, versus repeated reading alone, versus both interventions combined. Additionally, a control group of learning disabled students versus non-learning disabled student may help to identify to which groups of students this

type of intervention may be the most beneficial. Sample size should include students of varied socioeconomic and ethnic backgrounds

Conclusion

This study sought out answers to the questions: Will the use of a self-monitoring procedure utilizing graphing and re-reading improve the reading fluency and reading comprehension of third grade students with reading difficulties? What effect will rereading have on reading fluency? Will students begin to reread without prompting as a result of self-management of comprehension scores through graphing? The data illustrated that for all six of the participants in this study, rereading did result in a significant increase in both fluency and comprehension. It was determined from student feedback that they enjoyed the graphing and trying to increase their scores. It was also demonstrated in the Final Phase when students were given a choice of whether or not to reread, all students chose to reread all three final passages. The increase in confidence to improve was immeasurable. Combining the two interventions proved powerful for this group of special needs children. It would stand to reason that it would be beneficial for other struggling readers. Implementation of these interventions can be conducted with minimal monetary and time expenditures. Once students can tangibly see the benefits for rereading through their self-graphing, they may be much more likely to apply the strategy on their own, creating more independent readers.

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