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The Impact of Repeated Reading as an Intervention for Middle Grades Sixth- and Seventh-Grade Students on Reading Fluency

Christopher Dion Stocks
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The Impact of Repeated Reading as an Intervention for Middle Grades Sixth- and
Seventh-Grade Students on Reading Fluency

By
Christopher Dion Stocks

A Dissertation Submitted to the
Gardner-Webb University School of Education
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Education

Gardner-Webb University
2015

Approval Page

This dissertation was submitted by Christopher Dion Stocks under the direction of the persons listed below. It was submitted to the Gardner-Webb University School of Education and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Gardner-Webb University.

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Abstract

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The purpose of this dissertation was to determine the effects of repeated reading on readers identified as below grade in sixth and seventh grade. The study was set in a rural middle school located in the foothills of North Carolina.

Students selected for the study were identified utilizing Lexile levels to identify them as below grade level for sixth and seventh grade. Once students were identified, the teachers used Curriculum Based Measures (CBMs) to determine their current fluency levels. Oral reading fluency and MAZE CBMs were employed to measure speed, accuracy, rate, and comprehension. Classroom teachers also used a prosody rubric created by Zutell and Rasinski (1991) to determine the gain in prosody as a result of the intervention. Using a pre/posttest Analysis of Covariance (ANCOVA), students participated in a 7-week study using repeated reading as an intervention.

The study data compared the results between an experimental and control group utilizing repeated reading. The purpose of the study was to determine if repeated reading had an impact on reading fluency following the implementation of the intervention. The results of the study indicated that there were no statistically significant differences between the control and experimental group at the conclusion of the study. It was noted, however, that both groups made gains from pretest to posttest on all three measurements of oral reading fluency, comprehension, and prosody.

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Chapter 1: Introduction

The expansion of information-based technology and globalization of world markets has impacted the workplace reading demands. The number of jobs, even blue collar, have experienced a significant increase in the amount of literacy skills needed (Shanahan & Shanahan, 2008). The International Center for Leadership and Learning (Daggett & Hasselbring, 2007) completed a study of entry-level jobs. This study utilized the Lexile Framework noted as Lexile or abbreviated as L. This system uses a computer-based analysis of the semantic difficulty and syntactic complexity of text. This study reviewed the readability of workplace reading materials, e.g., handbooks, manuals, forms, and standard business documents. The reading requirements were 75% higher than the reading score of most eleventh-grade students. Requirements of the reading were noted as approximately 1200L to 1500L with a maximum score of 1600L. Seventy-five percent of eleventh graders in the study barely reached the Lexile level of 1200. As students move into the workplace, it is noted that 40% of high school graduates lack the literacy skills employers seek (National Governors Association, 2005). One of every five college freshmen must take a remedial reading course (Kaye, Lord, & Bottoms, 2006). Over half of adults scoring at the lowest literacy levels are dropouts (National Center for Educational Statistics, 2005). Not only has complexity of the literacy changed, the nature of reading has also transformed.

Literacy continues to dominate as a topic of concern for businesses and educators across the nation. Graham and Hebert (2010) stated,

The consequences of poor reading and writing skills not only threaten the well-being of individual Americans, but the country as a whole. Globalization and technological advances have changed the nature of the workplace. Reading and

writing are now essential skills in most white- and blue-collar jobs. Ensuring that adolescents become skilled readers and writers are not merely an option for America, it is an absolute necessity (p. 3).

The Program for the International Assessment for Adult Competencies (PIACC) (Goodman, Finnegan, Mohadjer, Krenzke, & Hogan, 2013) is a large-scale study focused on adult workplace competencies and life skills sponsored by the Organization for Economic Cooperation and Development. Specifically, the study focused on cognitive and workplace skills necessary for successful participation in 21st century society and the global economy. PIACC conducted the study in 2011-2012, and it included 5,000 adults between the ages of 16 and 65 from the United States of America as well as 22 countries with like samples of participants. “PIACC measures relationships between individual’s educational background, workplace experiences and skills, occupational attainment, use of information and communication technology, and cognitive skills in the area of literacy, numeracy, and problem solving in a technology rich environment” (Goodman et al., 2013, p. 1). PIACC defined four specific core competency domains: literacy, reading components, numeracy, and problem solving in technology rich environments. While the last two are optional, all participating countries must assess literacy and numeracy. Literacy specifically looked at the lower level of literacy which includes reading vocabulary, sentence comprehension, and basic passage comprehension. The study focused on “Do the participants have the foundational skills to develop the higher level literacy and numeracy to function in society?” (Goodman et al., 2013, p. 2). The reporting used two features. The first feature was a scale score ranging from 0-500 for three of the domains: literacy, numeracy, and problem solving in technology rich environment. The second was proficiency labels ranging from a low designation of 1 to a

high designation of a combined 4/5. Using a scale score of 0-500, the United States average score was 253. Scores from other participating countries ranged from 250 in Italy to 296 in Japan. Using the U.S. scale score, 12 other countries scored higher, five scored lower, and five were not statistically different. Only 12% of the U.S. participants scored the highest level of a 4/5 with seven other countries participating in the study scoring higher. Of the other participating countries, seven scored higher than the U.S., 11 scored lower, and four were not statistically different (Goodman et al., 2013). As a country that holds itself as a leader in the world, it is noted that literacy skills were significantly stronger in 50% of the countries who participated in this study. Those countries that participated in the study are world leaders such as Germany, Japan, Canada, Australia, and England.

Recent adoption of the Common Core standards is one means through which states are looking to address literacy concerns. These standards developed by the National Governors Association Center for Best Practices & Council of Chief State School Officers (2010), referred to as CCSS hereafter, and were recently adopted by the state of North Carolina for all K-12 classrooms. Common Core standards have placed an increased focus on students being “College and Career” ready. Haynes (2012) stated that Common Core standards have a focus on coherence with a progression in literacy that focuses on informational text requiring deep understanding accompanied by written and oral arguments with support. Common Core standards attempt to address several components of literacy by increasing the complexity and rigor in reading. The standards have emphasized a stronger selection of nonfiction articles with more depth in vocabulary, shifted the focus in writing from personal to academic writing, promoted deeper analysis of ideas and arguments in texts, and placed emphasis on inquiry and 21st

century research tools (Shanahan, 2013).

One of the most noted challenges is the increase of nonfiction text. In referring to the Common Core State Standards (CCSS, 2010), the standards suggest that by middle grades, students should spend 70% of their time reading nonfiction text in all content areas. With this introduction to a greater amount of text in all content areas, the need for students to have foundational skills in literacy is important. Comprehension of informational text is a complex process (Lee & Spratley, 2010). Such text demands more of adolescent readers through vocabulary and comprehension. Reviewing the expectations of the Common Core standards shows specific standards that focus on foundational skills, specifically K-5, with a strong focus at K-2 on elements such as fluency and decoding. It is noted that foundational skills are not a part of the standards after the fifth-grade year. Fluency is specifically addressed as a foundational skill throughout the standards through fifth grade.

In 1969, the United States began measuring student academic progress nationwide through the administration of the National Assessment of Education Progress (NAEP). The NAEP assessment for literacy measures students' abilities to read grade-appropriate text and then correctly select answers based on the reading (National Center for Education Statistics, 2011). Data from the 2011 Nation's Report Card (National Center for Education Statistics, 2011) showed that that adolescent literacy has shown very little improvement between the 2009 and 2011 administration of the test. Reviewing the results from the administration of the NAEP, eighth-grade students had a one point percentage increase from 33% to 34% as labeled proficient from the 2007 administration to the 2011 administration. Seventy-six percent of students administered the test in 2011 as eighth graders have a label of basic or below basic. High school seniors taking the

2013 administration of the test also showed little gain between the 2009 and 2013 administration of the test. In fact, seniors showed a decrease between the 1992 assessment which was the first assessment and the 2013 administration. The NAEP report indicated that students performing at this level have only “partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade level” (National Center for Education Statistics, 2011, p. 6).

Nature of the Problem

With the increased focus on literacy, educators are looking for specific areas that may assist with the need to create strong readers. The National Institute of Child Health and Human Development (NICHD, 2000), under the direction of United States Congress, created the first document nationally to identify the elements that are required to read and to teach reading. The report identified five specific areas that affect students’ reading abilities. This report has since become a referenced document when considering the elements of effective reading instruction. Reading fluency was identified as an area that has an impact in creating effective readers.

Students who do not achieve automaticity and fluency limit their ability to access technical, syntactically complex and intense levels of reading materials which are found frequently in secondary classrooms (Jacobs, 2008). Fluency instruction has been predominant in the early elementary years, and while empirical research has shown fluency has a positive effect on an elementary student’s comprehension, the effect is limited with older students who demonstrate mixed results (Denton et al., 2011). Denton et al. (2011) continued by stating that though assumptions have been made in regards to elements used to measure elementary fluency will have the same effects for older readers, that assumption has not been heavily substantiated. As cited by Denton et al. (2011),

Fuchs, Fuchs, and Maxwell's (1988) research is an exception, indicating a .91 correlation between oral reading fluency (ORF) and standardized reading tests utilizing middle schools students identified as having a reading disability. The National Reading Report (NICHD, 2000) specifically addressed fluency and its instructional value. It is noted that research has indicated that students who do not acquire fluency early in their educational experience have an increased chance of experiencing difficulty with learning and comprehending text specific to their later educational career (Chall, Jacobs, & Baldwin, 1990; Rasinski et al., 2005).

Comprehension instruction at the middle-grade level has focused heavily on interpreting text through reading and questioning. Carnegie Corporation of New York (2011) noted that students in the primary grades focus on text with familiar vocabulary within interesting text. This allows students to build their vocabulary while focusing on literature that holds the students' interest. Examination of students' understanding is usually completed through summarization and easily found facts from the story. Early reading is focused in the primary grades building the reading skills related to word identification and letter recognition. In many cases, readers who are designated as proficient in the early grades do not necessarily automatically become proficient as a secondary student (Biancarosa & Snow, 2006). This may attribute to reading difficulties being seen after third grade when students have an expectation of reading to learn rather than simply learning to read (Therrien, 2004).

Students in middle school who are reading at the grade-appropriate level are identified as having the ability to read from multiple points of view and constructing and reconstructing meaning (Jacobs, 2008). Students who read at the 90th percentile of reading volume, which consists of 21.1 minutes a day, encounter 1.8 million words a

year. Students who read less than 1 minute a day (10th percentile) encounter a total of 8,000 words a year (Cunningham & Stanovich, 2011). Adolescent readers are consistently challenged by a larger amount of text and introduced to content-specific concepts and vocabulary. Students are also challenged with the task of not only learning new ideas or concepts, but they must also interpret, synthesize, and critique text as they read. The mental load associated with reading at the secondary level continues to increase with the student's age. Archer, Gleason, and Vachon (2003) suggested that readers must direct their cognitive energies to focusing on decoding and constructing meaning. This requires students not only to focus on the identification of the word and its meaning but also on building comprehension of the text as a whole. Students enter middle school with the expectation that they have mastered the foundations of reading and should possess the ability to read difficult text and understand more abstract concepts. The fact remains that middle school students are still developing their fluency skills as well as their attitudes and behaviors towards reading (Ivey & Broadus, 2000). Secondary students have increased accountability in conjunction with greater expectations in curricula and content (Swanson & Hoskyn, 2001).

While many students enter middle school having basic foundational skills, the need for a systematic system to address students with reading difficulties and identify those deficits and address them with researched-based instruction is critical (Johnson, Pool, & Carter, n.d.). Many of the students who struggle with reading after elementary grades were not taught, or were ineffectually taught, fundamental skills for fluent reading and deep context processing (Roberts, Torgesen, Boardman, & Scammacca, 2008). While many older, struggling readers can read accurately, they do not tend to comprehend what they read for a variety of reasons. One of the root causes may be a

lack of fluency which inhibits the reader's comprehension (Biancarosa & Snow, 2006).

While reading fluency continues to move to the forefront of literacy instruction, it has a longstanding place in reading. Samuels (2012) provided a brief history of the study of fluency. Fluency did not become an important component of reading research until the 1970s, and it continues to expand today. Early research regarding reading was influenced by behaviorist research. Since behaviorist research focuses on the behavior of reading inside the mind, this limited the amount of research completed as fluency is an outward topic. Edmund Huey (Rasinski, Blachowicz, & Lems, 2012) was the first researcher to identify that a fluent reader must have the capability to complete a series of steps automatically when reading.

LaBerge and Samuels's (1974) model supported Huey's hypothesis as shared in their theory of Automaticity Model of Reading. This model states that a series of complex skills must work in tandem in a short amount of time. The theory states that if a reader had to attend to each individual task, the mental capacity of the reader to attend to each task would be improbable. As such, our ability to multi-task the reading process makes it so that we have the ability to associate letter sounds, letter recognition, blends, digraphs, vocabulary, and reading content in a manner that it can all work together to create comprehension (LaBerge & Samuels, 1974).

Posner and Snyder (1975) provided a different theory in which semantic context plays a greater role in the reader's ability to process. This theory states that the mind automatically activates a location in the brain and that associations are made to assist in the recognition of words. Good readers complete this automatically, freeing up cognitive ability. Poor readers, on the other hand, must use conscious-attention mechanism which utilizes context to assist the reader in predicting the upcoming words and the reader must

retrieve from memory to aid in predicting the word. This process in a poor reader utilizes more cognitive demand, therefore depleting the overall cognitive ability to connect ideas and garner comprehension (Posner & Snyder, 1975).

Students who do not have the ability to read fluently spend a large amount of their processing time decoding text rather than building meaning from the text. As illustrated by LeBarge and Samuels (1974) as well as Posner and Snyder (1975), students must have the ability to automatically recall letter sounds in conjunction with meaning in order to process the large amount of information they are exposed to at the middle-grade level.

Biancarosa and Snow (2006) stated that adolescent readers can often be identified in two categories: the first being students who have difficulty reading words accurately and this has been noted as a small range of students. Biancarosa and Snow (2006) also stated that students also fall into a category in which they do not read words with a percentage of accuracy and fluency that allows them to focus on comprehension. This can be contributed to the fact that while reading strategies have been introduced and utilized, students have not been given sufficient time to practice and master the skill with a more comprehensive and demanding range of text. This is further compounded by the increase in informational text that is a large segment of adolescent coursework (Biancarosa & Snow, 2006).

In 1997, Congress directed the NICHD to create a report that would provide guidance to educators regarding researched-based reading instruction (NICHD, 2000). Utilizing researched-based methodology, the panel reviewed research that meets the criteria to determine their findings. The study identified validated practices from research in the areas of Alphabetic, Fluency, Comprehension, Teacher Education and Reading Instruction, and Computer Technology and Instruction. The report established

that fluency instruction was one of the critical components of reading instruction. The report stated,

Fluent Readers are able to read orally with speed, accuracy, and proper expression. Fluency is one of several critical factors necessary for reading comprehension. Despite its importance as a component of skilled reading, fluency is often neglected in the classroom. This is unfortunate. If text is read in a laborious and inefficient manner, it will be difficult for the child to remember what has been read and to relate the ideas expressed in the text to his or her background knowledge. Recent research on the efficacy of certain approaches to teaching fluency has led to increased recognition of its importance in the classroom and to changes in instructional practices. (NICHD, 2000, p. 6)

Adolescent readers come to middle school with a variety of needs. Lee and Spratley (2010) suggested with an increase in the demand and amount of text, students must move beyond decoding to handling the demands of text from a variety of genres while encountering vocabulary that is unfamiliar as well as decoding new words. The authors continued by describing the ability to comprehend written text as more than fixed or static ability but rather a relationship between textual demands, student's prior knowledge, and goals when reading the text. As students encounter the demands of more cognitively challenging texts, readers are challenged to utilize a variety of cognitive skills. Lee and Spratley (2010) further suggested that reading is a process of constructing meaningful patterns which move from word to word, sentence to sentence, and paragraph to paragraph where readers continually look for connections and meanings that they may take away.

Program Setting

Located in the foothills of Western North Carolina, Middle School X was part of a small rural school district that serves approximately 10,000 students. The district has a total of 22 schools which are comprised of 13 elementary schools, four middle schools, four high schools, and one early college.

The U.S. Census Bureau (2010) stated that approximately 70,000 residents currently reside in this rural location. Of that population, 90% are Caucasian, 4% are African American, and 5% are identified as Hispanic. Individuals with a high school diploma who were over the age of 25 from 2007-2011 were 73.1%. While three-fourths of the population may have a high school diploma, only 25% of the population is identified as having a bachelor's degree from 2007-2011. The median family income for this area is approximately \$33,000. This is \$13,000 less than the average state median income in which the county is located.

A review of the North Carolina School Report Cards (2013) indicates a positive trend in reading achievement as measured by the state's summative assessment for reading test prior to the release of a new assessment aligned to the Common Core State Standards for English Language Arts.

Table 1

2009-2012 End-of-Grade Test Results for Middle School X

School Year	Reading Performance
2009-2010	71.0%
2010-2011	75.7%
2011-2012	76.5%

Note. Permission was given from the school system to include this data.

With the adoption of the new Common Core standards and a revision of the state's assessment, student proficiency dropped as the state increased the rigor of the cut scores known as READY. North Carolina adopted the READY standards to more closely align to the concept of College and Career Readiness. Proficiency on state exams showed a significant drop due to the increase in proficiency cut scores. Students in Grades 3-8 were 58.9% proficient in 2011-2012 in reading and math compared to 32% in 2013-2014 (North Carolina School Report Cards, 2013).

Table 2

2012-2013 NC Ready Reading Results for Middle School X

Grade Level	Percent Proficient
6	42.5
7	40.7
8	43.0
Overall Proficiency	42.7

Over half of the student population failed to show proficiency in the area of reading for the 2012-2013 school year.

The administration provided extensive professional development in research-based comprehension strategies as part of the School Improvement Plan to raise student performance in reading. Staff read and discussed during bi-monthly faculty meetings a variety of research-based professional reads. Lead authors include Chris Tovani, Harvey "Smokey" Daniels, Kylene Beers, and notable authors in the area of reading comprehension for elementary and secondary schools. Staff members read the text then worked collaboratively during bi-monthly faculty meetings to discuss implementation.

Faculty members often brought examples of student work samples to share and discuss. Topics of the research included the research-based comprehension methods such as visualization, metacognition, and fix-up strategies as well as identifying other components of reading instruction such as fluency. Various comprehension strategies that were implemented as suggested by the research and staff members all reinforced the strategies during Literacy Block. Literacy Block is designed as a defined period of time at the conclusion of the instructional day for the identified school. Students during this period have been instructionally grouped by their Lexile levels from the spring administration of the Scholastic Reading Inventory (SRI). This commercially purchased program provides staff members with Lexiles for students. Lexiles are a scientifically researched method of measuring text difficulty (Lennon & Burdick, 2004). Lennon and Burdick (2004) further stated that Lexiles provide a numeric representation of a reader's ability or text difficulty as well as a developmental scale ranging from 200L to 1700L. They continued by stating that students who are matched appropriately to a text can read with a 75% comprehension rate which allows for challenge and continued growth. The instructional time during this period was used to read a variety of books and articles scaffold by a certified teacher. All teaching staff members are assigned a group with struggling students in class of 10-15 and stronger readers in classes up to 30.

In order to prepare staff members, including those who do not normally address reading, a variety of staff reads and faculty meeting professional developments were used to give staff the skills to teach and not use Literacy Block as silent reading time. All staff reads had a focus on working with the foundational reading strategies that have been extensively researched as effective by the lead authors in the field. Those include questioning, visualization, previewing text, making connections, metacognition,

summarizing, evaluation, and knowing how words work. With the implementation and focus of staff development, the results of the 2009-2012 end-of-course reading scores increased a total of 5%. In the summer of 2013, all language arts teachers participated in a multi-day professional development titled “Reading Foundations.” This professional development was a part of the North Carolina State Improvement Project designed to assist schools in providing research-based instruction for students identified as having difficulties in math and reading. The program is a 5-day professional development program and the teaching techniques are often geared towards elementary education teachers to help early struggling readers with learning disabilities. Staff members were able to learn the foundational skills and knowledge needed to teach a beginning reader from phonics to fluency.

Literacy Block served as an intervention period for the school for the past 5 years. This block of instruction was designed to allow students and staff to focus and implement researched evidence instructional strategies. The focus of literacy block was also to increase the amount of time and number of books that students were exposed to on a daily basis. Currently, the school provides intensive instruction with researched evidence instructional programs such as SRA, Rewards, and Journeys for students who are designated as at-risk readers through the use of AIMSWeb© and Scholastic’s Reading Inventory (SRI). This program served as a diagnostic tool which identified students with basic skill gaps in comprehension and reading fluency.

Purpose

The purpose of this study was to determine the impact of repeated reading intervention on the fluency of sixth- and seventh-grade students who were identified as a reader performing below his/her current grade level. The prominent question is to

research if utilizing the researched method of repeated reading has an impact on the fluency and comprehension of middle school students who were identified as below proficient. This proficiency was determined using normed curriculum-based measurements (CBMs). The National Reading Report (NICHD, 2000) defined fluency as “the ability to read text quickly, accurately, and with proper expression” (Fluency, p. 5). Fluency is a contributing factor to overall comprehension (Fuchs, Fuchs, Hosp, & Jenkins, 2001; Jenkins, Fuchs, Espin, van den Broek, & Deno, 2003; Kuhn & Stahl 2003; Rasinski, 2006). Fluency is also recently empirically researched as one of the five instructional factors critical to students’ overall reading development (Rasinski, 2006). Students who struggle with fluency take twice the amount of time to complete assignments which lead to difficulty in understanding and relating to the material (Rasinski, 2000).

Background

Reading is a complex task that requires multiple skills utilized at one time. “The ability to comprehend written texts is not a static or fixed ability but rather one that involves a dynamic relationship between the demands of texts and the prior knowledge and goals of readers” (Lee & Spratley, 2010, p. 3). Students who do not accurately read words have both long- and short-term effects. Short-term effects include difficulty with vocabulary within context of a selection as well as difficulty with connecting meaning (Perfetti, 1986). Effects that have a longer lasting impact are struggling with higher level coursework, increased drop-out potential, difficulty finding employment, social/emotional challenges as adults, and inability to effectively seek and complete higher education programs (Archer et al., 2003).

As students move into middle school, the emphasis on higher levels of text with

greater cognitive demands moves students away from a focus on basic subskills of reading. As the nation shifts to the Common Core, the focus has moved reading instruction to focus on text complexities which have three interrelated components: the first being qualitative dimensions of text complexity (CCSS, 2010). The standards state that qualitative dimensions and factors are defined as being measured by the human's ability to attend to the level of meaning, the text structure, the convention as well as clarity of the language, and finally the demand of the overall knowledge. Examples of quantitative measures include length of text, word length and/or frequency, as well as text cohesion. All of these are frequently determined by computer measurement which constitutes the second level of the three levels of text complexity (CCSS, 2010). The final leg in text complexity utilizes teacher-made judgments regarding specifics to a reader's behavior, motivation, purpose for reading, and knowledge and experiences (CCSS, 2010).

With the implementation of the Common Core in the State of North Carolina, teachers in Grades K-5 now have a written guide to fluency instruction in their curriculum. Fluency starts in Kindergarten with a focus on letter recognition and sound associations. This continues to scaffold in each grade level with a specific list of standards written and identification of appropriate skills being listed for mastery. When students enter the fifth grade, the final grade in the elementary band of standards, their fluency standards focus on using context to confirm or self-correct; reread as necessary; and read grade-level poetry and prose with accuracy, appropriate rate, and expression on multiple readings as noted in the CCSS (2010). With a defined set of standards regarding fluency provided for elementary teachers, teachers are no longer given standards that specifically address fluent readers' skills. It is assumed that students have the ability to

read the text fluently or that appropriate intervention will be given as they move forward through the secondary level.

CCSS (2010) stated the following:

(The Common Core) Standards set requirements not only for English language arts (ELA) but also for literacy in history/social studies, science, and technical subjects. Just as students must learn to read, write, speak, listen, and use language effectively in a variety of content areas, so too must the Standards specify the literacy skills and understandings required for college and career readiness in multiple disciplines. (p. 2)

As the standards state above, this move towards an across-the-board definition in literacy for all content areas only reinforces the need for students to be fluent readers.

With students encountering a greater amount of text that is challenging not only in content but also vocabulary, students must have the ability to read text of a greater variety of topics than fiction as well as the ability to read a larger volume of material without struggling. With the call for 70% of text to be nonfiction by the time a student enters the latter part of high school, it is imperative that students have a strong foundation in reading fluency.

Summary

As Middle School X has moved towards implementation of the standards, data indicate that students entering the school are not prepared for the challenges of the curriculum. With the utilization of assessments such as CBMs, this may be attributed to foundational reading deficiencies. With students entering the secondary setting with such deficiencies, it proves to be even more of a challenge as the Common Core standards not only require students to support their ideas textually from the reading while increasing

their overall exposure to the amount of nonfiction reading; it also requires students to meet higher text complexity.

The new standards have asked for a great increase in rigor and the level of instruction in reading, added prominence to the literacy canon, proposed a shift from an emphasis on personal writing to one on academic writing, expanded literacy teaching into the disciplines of history and science, promoted deeper analysis of the ideas and arguments in texts, and placed a new emphasis on inquiry and 21st century research tools. (CCSS, 2010, p. 2)

Fluency may be a critical component to assisting struggling readers in accessing the complex demands of the Common Core standards as well as providing critical support to lifelong reading. This could prove to be an area that helps not only our students but also our workforce.

Chapter 2: Literature Review

The purpose of this study was to determine the impact of repeated reading as an intervention for identified sixth- and seventh-grade students on fluency. The National Reading Report (NICHD, 2000) defined fluency as “the ability to read text quickly, accurately, and with proper expression” (Fluency, p. 5). Fluency is a contributing factor to overall comprehension (Fuchs et al., 2001; Kuhn & Stall, 2003; Rasinski, 2006). Fluency is also recently empirically researched as one of the five instructional factors critical to students’ overall reading development (Rasinski, 2006). Students who struggle with fluency take twice the amount of time to complete assignments which lead to difficulty in understanding and relating to the material (Rasinski, 2000).

ORF

The earliest research regarding ORF began with 19th century psychologist William McKeen Cattell. Cattell distinguished that letters and words could be named faster than other categories which included colors or more concrete semantic objects such as pictured objects (Wolf & Katzir-Cohen, 2001). Furthermore, Cattell established the relationship of automaticity between letter naming and word recognition especially in the context of sentences (Wolf & Katzir-Cohen, 2001). Huey (1909) continued this research with a focus on eye movements and the history of reading in the historical book *The Psychology and Pedagogy of Reading*. From his research, Huey determined that reading does not occur from word to word but rather the eye moves from side to side pausing at least twice. Huey further connected his eye movement research to the idea of perception and how we read, connecting symbols to sounds. In his book, Huey gave a first glimpse into the idea of automaticity theory. Huey stated,

Perceiving being an act, it is, like all other things that we do, performed more

easily with each repetition of the act. To perceive an entirely new word or other combinations of strokes requires considerable time, close attention, and is likely to be imperfectly done, just as when we attempt so new combination of movements, some new tricks in the gym or a “new” serve at tennis. In either case, repetition progressively frees the mind from the attention to details, makes facile the total act, shortens the time, and reduces the extent to which the consciousness must concern itself with the process. (p. 104)

Though Huey (1909) did not establish automaticity theory, he did provide the earliest description of a student’s progress as beginning reader to the need to quickly connect letter to sounds to words. Huey suggested that readers must attend closely to the details of the word for recognition then move to the fluent stage where the reader can recognize words automatically utilizing speed and accuracy (Rasinski et al., 2012). Huey’s overall research focused towards silent reading and its importance, but his research provided an important connection between rate of reading and overall reading proficiency (Rasinski, 2010).

Rasinski (2010) stated that classrooms in the early 1900s spent time focusing on oral reading and utilizing instructional techniques of elocution. This technique required the teacher to orally read a passage aloud with the students following likewise to practice the skill. The teacher would provide opportunities for practice and feedback. The student would then recite the passage for the class and students. Students were rated by the teacher on the quality and recall of their passage (Rasinski, 2010).

The focus on oral reading declined in the late 19th and 20th centuries as silent reading became a greater focus in classrooms. The decline of silent reading came due to the expansion of available text due to technological advances as well as a movement in

the area of research (Rasinski, 2010). Researchers now focused on the idea of text comprehension rather than oral proficiency as the goal of reading instruction. With this movement, the focus on silent reading was seen as the best method as scholars felt that it closely resembled real world demands of students (Rasinski, 2010). With the move towards silent reading, teachers utilized round robin reading as a method to discern a student's ability to decode, yet little research has ever supported the ability of this method to support reading instruction (Rasinski, 2010).

Theories of Automaticity

One of the most predominant theories in reading fluency is the Automaticity Theory by LaBerge and Samuels (1974). Their theory suggested that reading requires two central tasks of word recognition and comprehension (Applegate, Applegate, & Modla, 2009). In the mid-1960s, LaBerge and Samuels's research on automaticity established that humans are built to process one item at a time. While we are built to attend to one task at a time, we can multitask if we either switch back and forth between the two tasks or if one of the tasks has become so customary to us that it is now automatic. Researchers refer to this idea as the top-down or bottom-up theory of reading (Stanovich, 1986). LeBerge and Samuels defined reading in two separate categories: word identification/decoding and comprehension. While a struggling reader can attend to both tasks, the ability of a reader to make connections to text, background knowledge, and make inferences requires a significant amount of attention. Fuchs et al. (2001) stated that LaBerge and Samuels's research indicated comprehension processes demand so much attention that the individual could not increase their comprehension skills. Readers must have mastered the basics of letter identification and sound association before moving forward in reading. If the bulk of the energy is spent on decoding, little capacity

is left to constructing meaning and responding to the text (Pikulski & Chard, 2005).

Samuels (1994) later revisited LaBerge and Samuels's (1974) model and expanded it to include multiple aspects of reading comprehension such as metacognition. Samuels (1994) further stated that metacognition is defined as self-monitoring of comprehension, not simply decoding text. Samuels proposed that automaticity may not be as linear as the original theory stated. Instead, sub elements such as schema may become automatic. To support this point, one may refer to a child who reads a text about soccer; they draw upon their prior knowledge of the sport to build meaning or recognize vocabulary from practice or coaching experiences. The reader uses real-life experiences to assist them in defining and determining unfamiliar text. The core of the theory still remains that depletion of memory occurs as tasks demand more to create meaning.

Stanovich (1980) established the Interactive Compensatory Model to explain reading deficits. This theory stated that while poor readers cannot utilize more than one cognitive process at a time, readers can utilize other skills to interpret orthographic and lexical knowledge. In essence, this model stated that information from several sources is available to assist readers in constructing meaning of text (Kuhn & Stahl, 2003).

Stanovich (1980) proposed that rather than a top-down or bottom-up approach as established by LaBerge and Samuels (1974), a reader utilizes high and low levels of cognitive processes to comprehend the text. Small units would be categorized as letters and identification of words, while high-level cognition would focus on prediction and word identification. Utilizing both the high and low levels of cognition together, the reader can gain meaning from the text. This would allow poor readers to compensate for deficiencies in a lower level area of reading. Therefore, a reader who has poor word recognition would be able to utilize the contextual clues of the piece to recognize an

unknown word (Stanovich, 1980).

Although different top-down conceptualizations of reading exist they all have the common view of a fluent reader as being actively engaged in hypothesis-testing as he proceeds through the text. Since the reader is only sampling textual information in order to test hypotheses, the reading process is viewed as being driven by higher-level conceptual processes rather than low-level stimulus analysis. In short, top-down analyses start with hypotheses and then attempt to verify them by processing stimulus, whereas bottom-up analyses start by processing the stimulus. (Stanovich, 1980, p. 22)

Logan's (1997) Instance Theory of Automatization was built on four tenets of speed, effortlessness, autonomy, and consciousness. Logan asserted that speed is critical to automaticity. As speed increases, with practice, the more automatic the task. Logan asserted that as speed increases with the more repetitions that occur, the reaction time eventually decreases. Logan also stated that the greatest improvement occurs during the first few trials. He provided the example of reading words that are printed in various colors for autonomy. Individuals were asked to identify the color for the words but instead frequently identified the word itself. Logan concluded by stating that consciousness is related to the realization of each movement we make. For example, excellent typists type each letter without consciously thinking about each letter. The typist instead focuses on the content of the sentence. Logan's theory stated that retrieval occurs based on prior experiences that have been stored within the brain.

The obligatory retrieval assumption is responsible for the expression of automaticity in performance. Attention to objects in a familiar task environment causes retrieval of the relevant knowledge. The more knowledge there is

available, the more that is retrieved. The response from memory becomes strong enough to support performance, so performance can become automatic. (Logan, 1997, p. 131)

This theory builds on the idea that even one single trial leaves a trace that can be built upon in the future. This means that the reader must encode reading structures such as letters, words, and ideas in their memory; and each time they encounter them, they retrieve this association. As more and more associations occur, the processing speed increases, therefore increasing the automaticity (Logan, 1997). Logan (1997) utilized a study in which participants were given a string of letters in which they had to identify the letters as words or nonwords. The trial presented the words each time. The variance in the study included words that were not presented to the participants in each session. Performance showed improvement if the words were presented each time and did not for words that were randomly shown as part of the trial. Participants also showed an increase in the speed of recognition from trial to trial. A second study utilized words, pronounceable nonwords, and nonpronounceable nonwords. Participants were required to repeat it 16 times. Logan's study required the subjects to discern between lexical decision and making a decision if the letters constituted a real word. Logan also included pronounceability which would mean determining which words could or could not be pronounced during the session. Both groups reviewed the words 16 times with the only variation in the experiment being that one group followed the same process every time with the other group alternating each session only focusing on lexical one session and then pronounceability the next time. The results indicated that the group who followed the same process each week performed better in identifying words versus nonwords and pronunciation (Logan, 1997). Logan also carried this theory into text-level processing.

This research supported the concept of repetition especially with consistency.

While each theory has differences, each theory supports the concept that repetition is a key concept to building efficacy with any new task. Repetition has a positive effect on automatization of the reading process from LaBerge and Samuels's (1974) theory to the idea supported by Logan (1997) and Stanovich (1980) (Kuhn & Stahl, 2003).

Stages of Reading Development

Chall's (1983) Stages of Reading Development established six categories that readers move through in order to become proficient readers. Each stage is comprised of a series of steps that do not move fluidly from one to the next but rather as competency is established (Chall, 1983).

Chall's (1983) Stages are as follows. Children in the prereading stage typically fall in the 6 months to 6 years age range. Noted as preschool children, the readers often "pretend" to read and retell the story once it has been read to them. Children may recognize letters of the alphabet, their name, and some signs. This stage is usually acquired through adult modeling of reading and interaction with the child while reading.

In the initial reading and decoding stage, Chall (1983) stated that children fall between 6-7 years old and typically are enrolled in the first or second grade. The child learns the relationship between letters and sounds as well as print and spoken words. High frequency words and phonetically regular words create the bulk of the simple text that the child reads. Sounding out words is a new skill utilized to help with unfamiliar one syllable words. Direct instruction in letter-sound relations known as phonics is practiced and used regularly. The use of text mimicking simple stories with phonetic elements is utilized with an emphasis on teaching phonics and high frequency words.

Text is read above the child's independent level to expose them to an advanced level of patterns, vocabulary, and concepts.

Chall (1983) continued with children in stage 2, stating they are typically in second and third grade and in the age range of 7-8 years old. The reader continues to read stories that are simple and familiar. Fluency continues to increase. This is achieved by utilizing the basic decoding elements, sight vocabulary, and meaning context in familiar stories. Instruction focuses on advanced decoding skills, increasing exposure to a wider range of literature both at the instructional level and independent level to focus on fluency. Oral reading above the child's reading level is used to expose him/her to new vocabulary, language, and concepts. At the conclusion of stage 3, readers can usually read and understand approximately 3,000 words and have oral recognition of 9,000 words. Listening is still the most effective means of learning rather than reading.

Reading for learning is the stage where fluency has an impact on students. Chall (1983) divided this stage into Phase A and Phase B of readers who fall between the ages of 9-13 years old. Phase A consists of students in Grades 4-8. Phase B consists of readers who are middle school/early high school (Grades 7-9). Readers in both stages are now utilizing reading to learn new ideas. Readers during Phases A and B see increases in vocabulary meaning and background knowledge. Reading increases to a broad range of topics (history, science, technology) and materials, i.e., textbooks, magazines, and internet (Carnine, Silbert, Kame'enui, & Tarver, 2004). Readers during this time increase from the early stages of Phase A from limited viewpoint to being able to read and utilize text from multiple perspectives. Students work through the text by discussion, answering questions, and writing. At the beginning of stage 3, readers still have a stronger reliance on listening comprehension for comprehension. At the conclusion of

the stage, reading and listening is typically equal and efficient for those who read well (Chall, 1983).

Readers are typically high school tenth- and twelfth-grade students in the age range of 15-17 years old who fall into the multiple viewpoints stage. Readers in this stage read widely and are exposed to a variety of increasingly complex texts in expository and narrative forms written with multiple viewpoints. Wide reading and study of physical, biological, and social sciences as well as popular literature, magazines, and word study comprise most of the reading and word work. Readers at this stage comprehend more through reading than listening with difficult text and content. Poor readers still benefit from listening.

Finally, Chall (1983) stated that construction and reconstruction begins for readers working at college level and beyond. A reader reads for work, pleasure, and purpose at this level. The reader integrates their knowledge with the reading to create new knowledge or add meaning to previous knowledge. Reading is wide and usually includes writing that integrates learning from the reading.

Understanding the stages as an educator gives you the ability to assess student development and its relationship to reading fluency. This assessment allows educators to provide instruction that meets students at their instructional needs (Carnine et al., 2004). This also assists adults who utilize interventions such as repeated reading to analyze the most appropriate point of intervention by knowing how students' progress through the stages of reading.

Elements of Reading Fluency

The definition of reading fluency continues to be discussed and defined in the reading research field. Fluency can be defined as the student's ability to decode with appropriate speed and automaticity. An example of such definition is offered by Fuchs et al. (2001): "Oral reading fluency is a direct measure of phonological segmentation and recoding skill as well as rapid word recognition" (p. 241). Recent researchers now insist that prosody, reading with expression, is an important element of fluency demonstrating a reader's ability to utilize appropriate expression, rhythm, intonation, and phrasing while reading (Hook & Jones, 2004; Rasinski, 2010). The National Reading Panel (NICHD, 2000) also included prosody as a component of their definition. Pikulski and Chard (2005) defined fluency as follows:

Reading fluency refers to rapid, efficient, accurate, word recognition skills that permit a reader to construct the meaning of the text. Fluency is also manifested in accurate, rapid, expressive oral reading and is applied during, and makes possible, silent reading comprehension. (para. 5)

Fluency then consists of three different but connected constructs consisting of accuracy, speed, and prosody.

Accuracy

Accuracy of decoding refers to the ability to correctly generate a phonological representation of each word, either because it is part of the reader's sight-word vocabulary or by use of a more effortful decoding strategy such as sounding out the word. (Penner-Wilger, 2008, p. 2).

Penner-Wilger (2008) also stated that accuracy in word decoding is the basis of fluency and connects to the theories of automaticity. In order to be considered an accurate reader,

one must have a strong understanding of alphabetic principles, the blends of sounds correlated to letter recognition, and a large reserve of high frequency words (Hudson, Lane, & Pullen, 2005). Hudson et al. (2005) also stated that readers who do not read words correctly will most likely have the inability to understand the author's original message in the text as well as forming misrepresentation due to inaccurate reading. The 2002 ORF Study, administrated as part of the National Assessment of Educational Progress (NAEP), also indicated that students who read with fewer errors had a higher average of comprehension as demonstrated by their reading performance on the NAEP comprehension test. The assessment also indicated that reading errors correlated to impacting comprehension as well (Daane, Campbell, Grigg, Goodman, & Orange, 2005). Accuracy is measured by calculating the percentage of words correctly decoded on a grade-level text. Three separate levels have been created that guide instructors in relation to instructional levels with accuracy. Students who read with accuracy between 97-100% are considered to be at the independent level of instruction. Students with accuracy between 90-96% should receive instruction to increase their fluency as they are working at their instructional level. Finally, students who are working at 90% or lower are considered to be at their frustration level and the reading material should be adjusted (Rasinski, 2004).

Rate

Rate is the second element of fluency and related to automaticity (Rasinski, 2004). Students must be able to recognize words and phrases without using a significant amount of cognitive ability doing so (Rasinski, 2010). Students who do not have automatic word recognition spend their time switching back and forth, quickly decoding the text, and working to comprehend the text. This movement between literal and

cognitive slows the reader as they work to connect sight to meaning. This limits the student's ability to comprehend (Hudson et al., 2005). Hudson et al. (2005) also noted that fluent readers are able to fixate on one word with one eye allowing overlap to multiple words. This allows a fluent reader to see more at a time versus a dysfluent reader who must constantly look back as well as look at smaller segments of the words. Faster readers then spend less time fixated on a word, have greater jumps on the page due to taking in more text, and spend less time rereading (NICHD, 2000).

Reading rates are calculated by asking students to read a grade-level appropriate text orally. The administrator notes the number of errors that occur while the student reads. The passage should be read within 60 seconds. If a student corrects an error during reading, this is not counted in the overall error count. Norms have been created that are used to compare the rate and determine the student's appropriate speed in ORF (Rasinski, 2004). Rasinski (2004) also stated that students who fall 20-30% below the target rate are candidates for further intervention.

Prosody

"Prosodic reading has been identified by most reading scholars doing work in fluency as an essential component of reading fluency" (Rasinski, Rikli, & Johnston, 2009). Prosody is the expressiveness of language. Linguistically, prosody is used to describe the rhythmic and tonal relationships in speech (Hudson et al., 2005). When a student reads with prosody, oral reading imitates speech using suitable phrasing, pauses, stress, rise and fall patterns, and overall expressiveness as dictated by the text (Schwanenflugel, Hamilton, Khun, Wisenbaker, & Stahl, 2004). While prosody in the most current literature is often included in the definition of fluency, there is a relatively small amount of research available regarding its impact (Schwanenflugel et al., 2004).

Schwanenflugel, Westmoreland, and Benjamin (2013) provided that prosody consists of pitch, duration or length, stress, and pausing. Schreiber's (1980) theory regarding prosody stated that difficulty with reading fluency often originates from readers struggling to transfer from oral language and its obvious prosodic marks to inferring prosodic marks which are explicit to written language. As Schreiber described, teachers often encourage students at this stage to "read with expression" (p. 178). This is difficult as a reader has no prior knowledge and there are limited markings to indicate how it should be read. Schreiber continued by indicating when readers do not divide the text appropriately due to a lack of prosodic markings, they do not divide the sentences into meaningful phrases which is a prime cause of difficulty with comprehension. This is relevant regardless of the reader's ability to decode text. Since young readers are dependent upon prosodic elements in oral language, there is reason to believe that they are correspondingly dependent on those features to determine the meaning of text (Allington, 1983; Dowhower, 1991). The use of intonation, appropriate phrasing, and stress are used as considerations that a child is fluent in reading. This is used as a clue to the reader's comprehension which is otherwise seen as an invisible process. With the fluent reader discriminating the text into appropriate segments, it is assumed the reader also comprehends (Kuhn & Stahl, 2003).

While research has been limited, researchers have considered the role prosody has in reading fluency. Herman (1985) conducted a study of using spectrographic analysis to count speech pauses of dysfluent intermediate students. This is represented as perceived changes in pitch, stress or loudness, and duration and pausing represented by waves. The subjects were eight remedial fourth- to sixth-grade children. The students were given passages at a moderate level of difficulty and using the repeated reading method until 85

words per minute (WPM) were obtained. Herman, employing the idea of prosodic reading as having appropriate pauses and rate, determined the subjects showed improvement in both through the repeated reading process. The subjects were also able to transfer to unread material.

Dowhower (1987) also conducted a study of prosodic features in children's oral reading. Utilizing their audiotapes, Dowhower observed the use of repeated reading on oral reading prosody for second-grade students. The students had the ability to decode but read slowly and word-by-word. Dowhower used the mean of the number of inappropriate pauses, phrase length, and sentence-final fall in pitch to discern their level of prosody. Dowhower also discovered that the use of repeated reading with students decreased the number of inappropriate pauses which were not grammatical as well as increased sentence-final vowel lengthening which is also a prosodic feature. Schrauben (2010) stated that the works of Herman (1985) and Dowhower supported the idea that the use of repeated reading is effective in assisting not only the automaticity of reading but as fluency increases so does prosody.

One of the challenges to studying the relationship of prosody in fluency is the inability to directly measure it (Schwanenflugel et al., 2004). Utilization of prosodic scales is often used in research to study and make determinations regarding a reader's fluency and prosody. National Assessment of Educational Progress (National Center for Education Statistics, 2002) conducted a study of oral reading fluency which utilized a prosodic reading scale. The scale employed criteria to designate a reader as fluent or nonfluent with a range from 1-4. The following illustrates directly from the ORF table how oral fluency was defined by the rubric. This ranges from a 1 being identified as "Reads primarily word-by-word. Occasional two-word or three-word phrases may occur

– but these are infrequent and/or they do not preserve meaningful syntax” (National Center for Education Statistics, 2002, Nonfluent Level 1). The scale then identifies a level 4 as

Reads primarily in larger, meaningful phrase groups. Although some regressions, repetitions, and deviations from text may be present, these do not appear to detract from the overall structure of the story. Preservation of the author’s syntax is consistent. Some or most of the story is read with expressive interpretation.

(National Center for Educational Statistics, 2002, Fluent, Level 4).

Other fluency scales designed by Allington (1983) as well as Zutell and Rasinski (1991) utilized the same ideas. Zutell and Rasinski’s (1991) scale broke the scale up into more distinct categories utilizing three 4-point rating scales. This scale, often identified as the Multidimensional Fluency Scale, categorized prosody into phrasing, smoothness, and prosodic features (stress, intonation, and duration) (Zutell & Rasinski, 1991). Zutell and Rasinski, utilizing a prosody scale, conducted a study with 200 teachers in seven different course sections. Providing feedback to the teachers who utilized the scale, the teachers were able to reach a .99 reliability (Zutell & Rasinski, 1991).

Paige, Rasinski, and Magpuri-Lavell (2012) conducted a study utilizing the Multidimensional Fluency Scale (Zutell & Rasinski, 1991). The study specifically used the scale to measure the prosody of 108 of 282 enrolled ninth graders in a high school where their overall academic achievement was measured by end-of-year results. The school’s results typically fell within the bottom 5% of the state. Students were assessed utilizing the Test of Reading Comprehension which consisted of a variety of subtests creating a composite score of silent reading comprehension. The study also employed the Multidimensional Fluency Scale using digital recording and then analyzing the results.

This assessment used a grade-level text of 408 words with the deliberate use of grade-level text as it was the determining factor in being proficient for state results. The rubric categorizes prosody into four prosodic dimensions: expression and volume, phrasing, smoothness, and pace. The scores are then totaled to give a range of prosody with 4 designated as low prosody to a total score of 16 which indicates high prosodic reading. The results of the study conducted by Paige et al. indicated that prosody had an overall impact on student comprehension when the student read with expression (see Table 3). The researchers in analyzing their results believed that the relationship between fluency and comprehension have a reciprocal effect on each other. A positive linear progression was established between the TORC-4 and Multidimensional Fluency Scale indicating that as prosody increased so did silent oral reading (see Table 6).

Table 3

Results from Paige et al. 's (2012) Study – Prosody and Silent Reading Scores

Prosody Score	Number of Students	Mean TORC-4 Score
16	11	101
15	4	98
14	8	99
13	5	92
12	19	91
11	23	90
10	10	84
9	9	81
8	8	74
6	4	61
5	3	67
4	2	76

Paige et al. (2012) continued by stating that the better a student understands a text, the stronger correlation they have to reading with expressiveness. Paige et al. also

believed that by reading with expression, the readers enhance their comprehension of the passage. A noted issue with the fluency beyond the elementary school is the lack of time, training, and knowledge to assist struggling students. Suggestions from Paige et al. included classes specifically designed for struggling readers or incorporation during content classes such as English and language arts where large amounts of reading is used to deliver content knowledge.

While researchers may not agree on the best method to determine prosody, Kuhn and Stahl (2003) believed the development of reading prosody to be a factor in increasing comprehension because prosodic reading designates that the child has segmented text according to major syntactic-semantic elements. Rasinski et al. (2009) also emphasized that while reading rate may indicate automaticity, it does not measure prosody or making meaning of the text with appropriate expression. This task requires students to make meaning of the text in order to provide appropriate expression.

Repeated Reading

LaBerge and Samuels (1974) established the theory of automaticity as the basis of reading fluency. While Samuels (2012) was key in originally establishing this theory, he felt that it was only a theory and needed to be put into practice.

Repeated reading is recognized as one of the oldest and most studied methods of fluency intervention. Repeated reading is based on the work of LeBerge and Samuels's (1974) information processing model in which fluent readers automatically decode, leaving attention free for comprehension (Meyer & Felton, 1999). Samuels's method of repeated reading is shared in his classic article from 1976 and reprinted in 1997, *The Method of Repeated Readings*. Repeated reading consists of rereading a short, meaningful passage numerous times until the reader can read with a level of fluency

deemed appropriate. This procedure is repeated then with a new passage (Samuels, 1997).

In the original study conducted by Samuels (1976), a young student identified with substantial learning difficulties selected a text of meaning and connection to the reader. Selecting a short selection of approximately 50-200 words, students were asked to read the passage to an assistant who recorded the speed and number of word recognition errors on a graph. Then the student was directed to return to his/her seat to practice until called back by the assistant. The procedure was repeated until the reader obtained an 85-WPM criterion rate. Once this was attained, the student was then directed to the next passage (Samuels, 1997). Utilizing five different passages, Samuels (1997) noted that reading speed increased. He also established that the number of repeated readings needed to reach the criterion reading speed began to show a decrease as the student continued repeated reading. Fluency was defined in this study as accuracy of word recognition and reading speed. Samuels (1997) further noted that speed was more important than accuracy as emphasizing accuracy creates a situation where the reader reads slowly only focusing on being correct. Samuels (1997) also noted that comprehension increased as the student experienced less decoding errors and could give their attention to the text rather than the phonemes.

Repeated reading has three phases. The first phase known as the initial timing phase requires the reader to time read a selection “cold.” Students are given a 50-200 word passage which they read repeatedly until they reach a criterion rate noted as WPM (Kuhn & Stahl, 2003). Readers who exceed these criteria should have the difficulty of the passage increased or decreased dependent upon their errors. Then the student practices the same reading selection for a determined amount of time. This can range

between three to seven times but can be as low as once. This is known as the practice phase of the method. During the practice phase, different models of fluent readers may also be provided from a recording of a proficient reader, reading with a proficient peer, or adult modeling. This is often referred to as assisted repeated reading (Rasinski, Homan, & Biggs, 2009). During the practice or assisted reading phase, the student receives feedback on performance and correction of errors to assist the student with feedback on their reading. The final stage requires that the student read for 1 minute. Students may graph and monitor their progress. Providing the opportunity to monitor and have feedback produces positive results (Archer et al., 2003).

The National Reading Panel's Report (NICHD, 2000) provided a meta-analysis of the research on repeated reading. The report utilized 16 studies utilizing a pre and posttest which provided the opportunity to analyze improvement or lack thereof in reading utilizing guided repeated reading. Due to the design of the study, two were dropped from the findings. The studies included control groups which allowed for contribution to the use of guided repeated reading. The analysis included a total of 605 combined subjects ranging from elementary age to secondary students. With a few omissions, there were a total of 99 effect sizes used to compare control and experimental group performance. The studies using normal classroom populations had a grade range of 2-5, while studies that focused on poor readers ranged from second through ninth grade. The analysis revealed that in all but two of the studies, there were significant differences for the guided repeated reading group compared to the control group. There was a large range in the effect size from 0.05 to 1.48. The National Reading Report contributed this to a large discrepancy in the reported data ranging from a low of 12 subjects to as many as 78. Using a weighted average, the effect size was 0.41. While

many of the studies from the National Reading Report analysis focused on poor readers (398 students), causation of increased fluency in only poor readers could not be significantly identified. The National Reading Report stated that fluency should be viewed as developmental.

A meta-analysis of repeated reading was also conducted by Therrien (2004), seeking to find gain in fluency and comprehension through the use of repeated reading. This analysis also found a positive impact from the use of repeated reading as well as an impact on comprehension. The effect was prevalent students with learning disabilities as well as those without a learning disability. Students with a learning disability had an effect size of .77 and $SE=.09$, and those without had an $ES=.76$ and $SE=.09$. The overall effect on comprehension was smaller with LD students: $ES=.59$, $SE=.11$ and nondisabled $ES=.48$, $SE=.071$. The meta-analysis also looked at the ability of the intervention to transfer or nontransfer. Nontransfer reviewed the student's ability to read a passage or comprehend a passage after multiple readings ($ES=.83$ Fluency and $ES=.67$ Comprehension). The study also looked at a student's ability to transfer which required the student to utilize the intervention and then measure the ability to read fluently and comprehend a different passage ($ES=.50$ Fluency and $ES=.25$ Comprehension). In all measures, Therrien discovered the use of repeated reading had measurable impact on the student's fluency and a smaller yet positive impact on comprehension.

The study by Therrien (2004) also noted the following recommendation in regards to effectiveness in implementing the use of repeated reading. Students should be required to read passages aloud to adults as it had a significant impact on students (mean Fluency=1.37 and mean Comprehension=.71). Reading a passage for nontransferable purposes three to four times provided a mean gain between .85-.95 for fluency. The

study noted that reading a passage more than four times provided little statistical gain. When addressing comprehension and fluency, feedback given on word errors by adults had an $ES=1.37$. Therrien stated providing a student with a criterion reference/goal provided a stronger fluency mean than a required number of readings.

Repeated Reading and Comprehension

Secondary reading programs should focus on fluency as it has been shown both empirically and clinically to have a relationship between fluent oral reading and overall reading ability, including comprehension (Archer et al., 2003). Zimmerman and Rasinski (2012) cited Dudley (2005) indicating that students who do not have accurate speed and decoding in reading fall behind their average peers experiencing difficulty in catching up in academic performance and achievement. The intervention of repeated reading has been used to provide support for students who struggle with fluency. Jay Samuels not only noted the increase in fluency when using the intervention of repeated reading, he also noted the correlation to improved comprehension (Kuhn & Stahl, 2003).

Kuhn and Stahl (2003) found 15 studies which assessed the effects of repeated reading on fluency using a control group. The studies required the reader to read each passage a set number of times with a median number of three. Six of the studies showed repeated reading produced significantly greater achievement than the control group while eight produced no such results for increasing fluency. The studies also showed that as a general rule, when fluency increased so did comprehension.

Klauda and Guthrie (2008) specifically looked at fluency and comprehension by breaking fluency into three distinct categories – word, syntactic, and passage. Their study of 278 fifth graders from 13 classrooms located in a mid-Atlantic state utilized the Gates MacGinitie Reading Comprehension test in conjunction with the Inference

Assessment, Woodcock-Johnson III Reading Fluency Test, and Passage Oral Reading Assessment. While the design of the study was to determine if there was a difference between each category, the results noted that overall students with high comprehension scores were strong in all three areas of fluency. Klauda and Guthrie (2008) stated that with their research design, they could effectively isolate outside factors and create a study that looks closely at the correlation of word, syntax, and passage fluency. This study revealed that word and syntax did relate to automaticity theory and therefore gave more cognitive ability to relate to background knowledge and inference. It was also determined that this was true for passage-level fluency. The authors also noted that unlike Schwanenflugel et al.'s (2004) study in which they stated that prosody did not correlate, their study used text that was a part of their study's measurement tool. While this is a noted strength from the researcher's perspective, Shewanenflugel et al. (2004) also noted it as a limitation.

Research has shown statistical gains as well as supporting the idea that fluency for older readers does not make a significant impact. A meta-analysis for older students with reading disabilities conducted by the Center for Instruction suggested that focusing on fluency has limited gains for comprehension. It specifically noted that students may still gain from fluency instruction with the use of another method. Standard measures showed no statistically different measure of difference used in the studies (Scammacca et al., 2007).

This was also supported by a study conducted by Spencer and Manis (2010) for students with severe reading deficits in two middle schools located in the outskirts of a large urban city on the west coast. Participants were 17 girls and 43 boys in Grades 6-8 ranging in age from 10 to 15. Students were enrolled in self-contained special education

classrooms with severe learning disabilities. The students were representatives of the most severely delayed in reading in the school. Students were given a pre and posttest assessment using a series of tests such as Woodcock Johnson, Gray Oral Reading Test, and Wechsler Intelligence Scale for Children IV. The experimental group utilized the Great Leaps program focusing on fluency while the control group received study skills. While the study showed that fluency increased, there were no statistically measurable indicators of improvement in the area of comprehension. These researchers did note that the severe nature of the reading difficulties associated with this study may have been an outlier in the research.

Samuels (1997) stated,

Repeated reading is a meaningful task in that the students are reading interesting material in context. Comprehension may be poor with the first reading of the text, but with each additional rereading, the student is better able to comprehend because the decoding barrier to comprehension is gradually overcome. As less attention is required for decoding, more attention comes available for comprehension. Thus rereading both builds fluency and enhances comprehension. (p. 378)

Purpose of Study

The purpose of this study was to determine the impact of repeated reading as an intervention on fluency for identified sixth- and seventh-grade students who were identified as reading below their current grade level. This study sought to specifically review repeated reading which addresses automaticity and speed while also providing feedback specific to prosody. While common fluency measures that dominant fluency research, such as DIBELS, has a stronger focus on reading automaticity rather than

reading fluency (Dennis, Solic, & Allington, 2012), Dennis et al. (2012) suggested that the definition of fluency should include accuracy, automaticity, and prosody. They concluded that without focusing instruction in regards to each element, we will create a society of word callers without the ability to transfer these skills to comprehension.

Research Questions

1. How did the use of repeated reading impact the fluency of middle grade students in sixth and seventh grade identified as reading below grade level?
2. What was the impact of repeated reading on the participating students' comprehension?
3. What was the impact of repeated reading on the participating students' prosody?

Summary

Paige (2012) made two claims:

First, achieving grade level competency with reading fluency is still very important to becoming a competent adolescent reader. Fluency was shown to account for about half of the variance in reading comprehension in both middle and high school struggling readers. This suggests that it cannot be assumed that because students are adolescents they have developed appropriate fluency with grade level texts. Second, prosody emerges as a significant indicator of oral reading fluency that contributes additional and unique variance to reading comprehension. This has important implications for the development of prosody in readers because it suggests that students with greater prosody comprehend at a higher level. (p. 55)

It is noted that as early as 1918, researcher L. S. McLeod did a review of passages

and their effect upon the rate, accuracy, and comprehension of students in Grades 1-8.

While much of the literature in this review substantiates the idea of repeated reading having a strong effect on readers, his research supported the same idea with the exception of limited promise as grade levels increased. In his article which examined the effects of difficult reading material on students, he noted that as the grade level increased with difficult material so did the plateau effect increase on the student's rate, accuracy, and comprehension.

While research has focused on elementary students and reading fluency for a large majority of the fluency research, further research into how this affects student reading comprehension is an avenue for continued exploration.

Chapter 3: Methodology

“Fluent readers can read text with speed, accuracy, and proper expression.

Fluency depends upon well-developed word recognition skills, but such skills do not inevitably lead to fluency. It is generally acknowledged that fluency is a critical component of skilled reading.” (NICHHD, 2000, p. (3) 1). Reading difficulties are often associated with struggling readers past the third grade when students are moving from learning to read to reading for the understanding process (Therrien, Kirk, & Woods-Groves, 2012). The lack of reading fluency is often a characteristic associated with poor readers. Defining the differences between poor and strong reading fluency not only categorizes readers as strong or poor readers, it also has a strong correlation to reading comprehension (Hudson et al., 2005). The purpose of this study was to measure the impact of repeated reading intervention on the fluency of sixth- and seventh-grade students who are identified as readers performing below their current grade levels. This study examined the benefits and limitations in using repeated reading as a fluency intervention for middle school students identified as below grade level in the sixth and seventh grade. Effectiveness of the repeated reading fluency intervention was measured statistically by accuracy, rate, and prosody.

Research Questions

1. How did the use of repeated reading impact the fluency of middle grade students in sixth and seventh grade identified as reading below grade level?
2. What was the impact of repeated reading on the participating students’ comprehension?
3. What was the impact of repeated reading on the participating students’ prosody?

Participants

Participants in the study were students identified as below grade level in reading utilizing the state summative assessment and SRI at Middle School X. Students were selected from both the sixth and seventh grades to participate in the study. In addition, the use of a universal screener, AIMSWeb®, allowed the researcher to determine fluency rates below the national norm.

Middle School X served approximately 670 students located in the western part of North Carolina. The general population of the school consisted of a predominantly Caucasian student population with Hispanic students being the second largest group of students served. Table 4 provides a demographic breakdown of the students in the sixth and seventh grades for the 2014-2015 school year.

Table 4

2014-2015 Middle School X Demographics for Sixth and Seventh Grades

Grade Level	Total Students	Male	Female	Caucasian	African American	Multi Ethnic	Hispanic
Sixth	216	130	86	188	1	6	21
Seventh	214	107	107	183	1	3	27

Since the SRI assessment measured a wide variety of comprehension skills mainly through the student's vocabulary knowledge, the utilization of a universal screener allowed identification of students who need assistance with fluency intervention as a means to address overall comprehension. Students with severe reading difficulties were assigned to a scripted reading program and excluded from the study. This allowed

students designated in this group to focus time on specific basic reading skills such as phonetics and basic decoding. Students selected for the study should have mastery of basic decoding skills. The screener is designed to eliminate decoding as a primary reason for the student's lack of fluency. Students were placed into Literacy Blocks, a designated instructional time for reading, which also provided structured intervention time during the final 45 minutes of the day. During this instructional period, all students in the school participated in reading novels, articles, and literature and discussion.

Students selected for the study scored a Level 1 or Level 2 on the NC READY end-of-grade (EOG) reading test. According to the State of North Carolina, the following descriptors for the students and parents from the North Carolina Department of Instruction (2014) Department of Accountability described the student's ability as,

Achievement Level 1 and Level 2 descriptor:

Students performing at this level have limited command /partial command of the knowledge and skills contained in the Common Core State Standards (CCSS) Reading Standards for Literature as assessed by referring to the text when asking and answering questions; recounting stories and determining a central message, explaining how the message is conveyed through key details in the text; describing characters and explaining how their actions contribute to the plot; and determining the meaning of words and phrases as they are used in a text, especially literal and nonliteral language. They will need academic support to engage successfully in this content area.

Students have limited command/ partial command of informational text, showing inconsistency in referring to the text when asking and answering questions; identifying the main idea and finding the most important details that strengthen

the main idea; describing the relationship between events, ideas, concepts, or steps using appropriate language; determining the meaning of words and phrases as they are used in a text; demonstrating understanding through information gained from illustrations and words; and describing connections between sentences and paragraphs.

Students demonstrate limited command/partial command of language when determining the meaning of a word within the context of a sentence and distinguishing between literal and nonliteral meanings. They rarely demonstrate the use of grade-appropriate vocabulary and will need academic support to engage successfully in this content area. (p. 2)

The academic profile as shown by the 2013-2014 READY Assessment provides the following with regard to the breakdown of proficiency as measured by the North Carolina EOG. The data are inclusive of the pool of students who were a part of the study. The utilization of the Level 3 designated students as borderline proficient with those in the categories of Levels 1 and 2 as not proficient. Those characteristics are listed above for students designated as Levels 1 or 2. For the purpose of this study, the data from the NC READY assessment was a baseline in conjunction with the spring administration of the SRI. Students designated as below grade level were then designated as candidates to participate in the study. Students were randomly assigned by the assistant principal to the assigned groups of experimental and control by grade level. Since the data are baselines, students who were Level 3 may have been included in the study if their fluency levels were below the norms as established by AIMSweb®.

Table 5

Achievement Levels of 2013-2014 NC READY Assessments

	No of Tests	Level 1	Level 2	Level 3	Level 4	Level 5	% Level 4-5	% Level 3-5
Sixth Grade	191	39	40	28	63	13	39.8	54.5
Seventh Grade	197	35	39	25	82	16	49.8	62.4

Since this study began at the beginning of the 2014-2015 academic year, all students in each grade level read a grade-level novel that emphasizes character education and anti-bullying. The novels also focused on middle school students involved in appropriate decision making. Each group was screened, and a baseline was created using AIMSweb© to determine their beginning fluency score.

AIMSweb© is a commercial product that allows schools to effectively administer CBMs and benchmarks. National norms are set utilizing the data that are entered into the system. AIMSweb© stated that though many schools utilize their system, many schools such as the study school, use the system for those considered at risk only (Aimsweb© National Norms Technical Documentation, 2012). They continued by stating that the national norms they create take into consideration this possible oversampling, and the norms as based on schools that conduct universal screening. Data are then compared to national sampling from the National Center for Educational Statistics to reflect gender, ethnicity, and socioeconomic status (Aimsweb© National Norms Technical Documentation, 2012). Students taking the test were categorized according to the AIMSweb© data and included if they were deemed as being a student needing further instruction in reading fluency.

All students were required to have parental permission to have their data included as part of the study. Students returned signed and dated forms to the appropriate teacher. Students were given the option to submit their data to be a part of the study at the conclusion of 7 weeks.

Instruments

Repeated reading is one of the most utilized researched reading interventions for fluency (Therrien, 2004). This method requires that students read a passage at an appropriate instructional level aloud until the student has met the suitable WPM (Ming & Dukes, 2008). An effective means of measuring fluency is the use of CBMs. CBMs originated through the work of University of Minnesota's Institute for Research on Learning Disabilities during the mid-1970s. The work was a result of the passage of the IDEA law also known as Individuals with Disabilities Act (Stecker, Fuchs, & Fuchs, 2005). Stecker et al. (2005) continued by stating that the original work was created to provide educators with a simple, efficient, and technically adequate means of assisting special needs educators with tracking the progress of special education students. The ultimate goal was to provide the special educators a way to progress monitor students and make informed educational decisions. With the growth of Response to Instruction (RTI), CBMs are now used on a regular basis to address and screen all students regardless of their academic ability. Johnson et al. (n.d.) suggested that many secondary schools have multiple points of data to pull from but that universal screening still provides the best foundation to begin an intervention plan. While this may be suggested, many secondary schools still do not use a universal screening process to identify students but rely on the information that is usually provided by state assessments.

The use of CBMs "is a set of standardized measurement procedures used to index

the level and rate of student achievement within the basic skills of reading, math, writing, and written expression” (Yeo, Fearington, & Christ, 2012, p. 1). CBMs are designed to be given at regular intervals to assist teachers with setting meaningful long- and short-range goals (Fuchs & Fuchs, 2007). Fuchs and Fuchs (2007) continued their explanation further by stating,

CBM tests (also called “probes”) are relatively brief and easy to administer. The probes are administered the same way every time. Each probe is a different test, but the probes assess the same skills at the same difficulty level. The reading probes have been prepared by researchers or test developers to represent curriculum passages and to be of equivalent difficulty from passage to passage within each grade level. (p. 2)

This study utilized progress monitoring through the use of CBMs/Probes and the Multidimensional Fluency Scale (Zutell & Rasinski, 1991) to measure the effect of repeated reading on rate, accuracy, comprehension, and prosody.

Reading-Curriculum Based Measurements (R-CBMs) were used to measure progress during the implementation of the repeated reading method utilizing AIMSWeb© to provide the assessments and track student progress. CBM research, conducted over the past 30 years, has shown CBMs to be reliable and valid measures of fluency and comprehension (Fuchs & Fuchs, 2011). AIMSWeb© provides two progress monitoring tools, ORF which measured accuracy and rate and MAZE CBMs which specifically measured change in student comprehension.

ORF assessments are utilized as one measurement tool to quantify overall reading achievement (Fuchs et al., 2001). ORF explicitly focuses on two of the three measurements for fluency, rate and accuracy (Hansbrouck & Tindal, 2006). ORF

measures were originally designed utilizing local curriculum as the platform in which reading selections were used in the ORF process. Educators would select a passage from their literature and create a standardized means of administering the passage. With its recent popularity, standardized measurement platforms with common sets of reading passages have grown and now are readily available as an easy and standardized means of measuring ORF. Systems such as AIMSWeb®, DIBELS, easyCBM, and Edcheckup are all commonly utilized standardized platforms for measurements of ORF (Petscher, Cummings, Biancarosa, & Fien, 2013).

Petscher et al. (2013) described the standardized practices associated with ORF as including

- (a) Administration begins with calculating the total of words read correctly in sixty seconds
- (b) Mispronunciations, substitutions, omissions, and transpositions are counted as errors
- (c) Inserted or repeated words are ignored
- (d) Students are allowed to “self-correct” a previously mispronounced word if done so within three seconds
- (e) If a student hesitates or struggles with a word for three seconds, an examiner provides the word but marks it as an error on the test form. (pp. 4-5)

Calculations were made by taking total words read correctly and subtracting errors. The final calculation is designated as the words read correct per minute (WRCPM).

Ardoin and Christ (2009) stated that Deno and colleagues developed CBMs of reading (CBM-R) in the late 1970s and 1980s as a means of evaluating instruction and

monitoring student progress. Ardoin and Christ further stated that CBM-Rs are a systematic formative evaluation that is administered monthly, weekly, and/or daily. Students are timed for 60 seconds and the student's WRCPM is recorded. Data are displayed graphically noting changes in slope allowing the educator to assess the effectiveness of the intervention/instruction.

While the use of CBMs is well established, it too has only a fledging history in upper grades, especially middle school. It is noted that recent research suggests that as a student's grade increases, so does their sensitivity to WRCPM. Ticha, Espin, and Wayman (2009) refer to a study completed by MacMillan (2000). The study focused on the changes in words read correct per minute (WRCPM) from fall to winter of 1,691 students in Grades 2-7. Students in Grade 7 only showed an average gain of seven WRCPM versus Grade 2 which showed an average gain of 54 WRCPM (Ticha et al., 2009).

MAZE passages were used to measure comprehension and are also classified as a CBM. The passages were selected from the AIMSWeb© progress monitoring program. AIMSWeb© passages are created from narrative fiction passages that have been tested with students. The passages utilized are designed to be equivalent in difficulty with each grade level (Shinn & Shinn, 2002). MAZE passages are designed to be 150-400 words in length with the first sentence left in tact. Afterward, every seventh word is substituted with a choice of three words inserted into a parenthesis. The distracters are designed to be a word that is of the same type (pronoun, verb, noun), and the second word is a distracter that does not pertain to the original meaning of the sentence (Shinn & Shinn, 2002). Scoring was completed by reviewing the assessment and subtracting the incorrect number of selections from the total attempted.

MAZE passages have a high correlation to reading comprehension. A study conducted by Ticha et al. (2009) replicated an original study conducted by Espin, Wallace, Lembke, Campbell, and Long (2009). The purpose of the study in both cases was to assess the reliability and validity of reading aloud as well as determining MAZE-selection measures as indicators of performance and progress in reading (Ticha et al., 2009). Both studies specifically looked at the reliability of reading aloud (WRCPM) and MAZE. Together the studies illustrated reading aloud and MAZE were determined as reliable as well as valid indicators of performance. The instruments used to measure this validity were the state end- of-year assessment as well as the Woodcock and Johnson III. Both studies also showed that use of repeated, weekly measurements, such as a MAZE reading selection measured substantial growth over time. Students who were given a weekly MAZE showed significant gains noted as 2.88 in the original study and 1.29 in the replicated study for the use of the 3-minute word study. The original study completed by Espin et al. (2009) showed a strong correlation between the MAZE and the state test used as one of the measurement instruments in the study. It is also noted that Ticha et al. showed that students participated in the administration of the Woodcock Johnson III assessment used as criterion showed significant gains on the MAZE as well. A caution suggested from the study conducted by Espin et al. is that reading aloud (WRCPM) reaches a natural reading level which may not change over time. This supports previous statements made in regards to students not being as sensitive to WRCPM as their age and grade increase.

The use of the Multidimensional Fluency Scale by Zutell and Rasinki (1991) was used to measure student prosody pre and post intervention. This scale specifically rates Expression and Volume, Phrasing, Smoothness, and Pace.

As stated previously in this document, fluency has often been associated only with automaticity which is typically measured by speed as well as accuracy. Both of these elements are measured through CBMs such as ORF probes. An important component, though often overlooked, is prosody. Readers who connect with the meaning of the text exhibit the same skills as those who are fluent speakers. Meaning is given to the text by speeding up or down, raising or lowering the reader's pitch, and increasing or decreasing volume (Paige et al., 2012). Paige et al. (2012) further stated that those who are not fluent read text in a manner that is monotone word-by-word which makes comprehension and understanding more difficult. Paige et al. continued by stating that research conducted by Benjamin and Schwanenflugel (2010), Daane et al. (2005), and Pinnell et al. (1995) have shown a strong and substantial relationship between reading prosody and silent reading comprehension. They further validated the connection between prosody and silent reading comprehension through the use of the Multidimensional Fluency Scale (Zutell & Rasinski, 1991).

A comparison between ninth-grade students' performances on the Test of Reading Comprehension: Fourth Edition (TORC-4), which measures student silent-reading comprehension and student oral reading of a 408-word narrative passage utilizing the Multidimensional Fluency Scale as a measuring instrument was conducted. Results indicated that students who scored high on the TORC-4 were also the same students who scored high on The Multidimensional Fluency Scale (Table 6) created by Zutell and Rasinski (1991) provided a rubric which defined four levels focusing on Expression and Volume, Phrasing, Smoothness, and Pace. The categories specifically reflect research conducted while students have read for teachers and researchers. While Zutell and Rasinski (1991) stated the distinction between Levels 1 and 4 is usually distinct, the

difference between 2 and 3 has a distinct “style” as well. Readers categorized as a Level 2 typically operate in two to five word stretches that fall within phrases and clauses. Readers identified as a Level 2 would be frequently classified as “choppy” readers. Readers classified as a Level 3 have more control and read more chunks quickly but read *through* with minimal note of punctuation. Due to this lack of cue to punctuation, they often breathe in inappropriate places.

Table 6

Multidimensional Fluency Scale

Score	Expression & Volume	Phrasing	Smoothness	Pace
1	Read words as if simply to get them out. Little sense of trying to make text sound like natural language. Tends to read in a quiet voice.	Reads in monotone with little sense of phrase boundaries; frequently reads word by word.	Makes frequent extended pauses, hesitations, tales starts, sounds-outs, repetitions, or multiple attempts.	Reads slowly and laboriously.
2	Begins to use voice to make text sound like natural language in some areas but not in others. Focus remains largely on pronouncing the words. Still reads in a quiet voice.	Frequently reads in two-and three-word phrases, giving the impression of choppy reading, improper stress and intonation fail to mark ends of sentences and clauses.	Experiences several “rough spots” in text where extended pauses for hesitations are more frequent and disruptive.	Reads moderately slowly.
3	Makes text sound like natural language throughout most of the passage. Occasionally slips into expressionless reading. Voice volume is generally appropriate throughout the text.	Reads with a mixture of run-ons, midsentence pauses for breath, and some chopiness; reasonable stress and intonation.	Occasionally breaks smooth rhythm because of difficulties with specific words, structures, or both.	Reads with an uneven mixture of fast and slow pace.
4	Reads with good expression and enthusiasm throughout the text. Varies expression and volume to match his or her interpretation of the passage.	Generally reads with good phrasing, mostly in clause and sentence units, with adequate attention to expression.	Generally reads smoothly with some breaks, but resolves word and structure difficulties quickly, usually through self-correction.	Consistently reads at conversational pace; appropriate rate throughout reading.

Note. (Zutell & Rasinski, 1991).

While the total score is subjective, Rasinski (personal communication, 2014) stated,

Right now, the total score that indicates proficiency is subjective based on our own observation. I have been saying lately that scores of 10 or above indicate an adequate level of proficiency in prosodic reading. However, as I mentioned it is a subjective judgment.

Method of Data Collection

For Research Question 1, “How did the use of repeated reading impact the fluency of middle grade students in sixth and seventh grade identified as reading below grade level,” students in the study were separated into control and experimental groups. Students in the control group participated in reading a novel that was read by all their peers on the grade level as part of the beginning of the year introduction to Literacy Block. During the study, students in the experimental group read the novel in conjunction with participating in a repeated reading process program. The process was outlined in a published product which provided the reading material as well as the specific guidelines that the experimental group were to follow. The directions provided instructions on how to partner students. Students were placed in pairs in which they were only approximately 10 words apart from their peer. The teacher reviewed the reading material at the beginning of the week as well as modeling the repeated reading process during the first week of implementation. When a student did not have a peer, the teacher read and provided the feedback to the student. A pre/posttest was used to measure gains, if any, in both the control and experimental groups. Students were administered the AIMSweb© ORF. The assessment utilized a reading passage giving the reader 1 minute

to read the passage. The number of words read minus the number of errors gave the calculation for accuracy as well as rate.

For Research Question 2, “What was the impact of repeated reading on the participating students’ comprehension,” students were given pre and posttest measurements utilizing the MAZE as part of the universal screener. All students were administered the MAZE during an instructional period as a group according to their assigned control or experimental grouping. The MAZE allows students to have 3 minutes to read a passage and select the correct word from a series of three words as options. This is repeated three times with an average determining the comprehension score. Utilization of the MAZE in both pre and post intervention in the experimental and pre and post reading of the text allowed a comparison between the two groups. Students were given the same MAZE both pre and post intervention to allow for comparison.

For the final question, “What was the impact of repeated reading on the participating students’ prosody,” teachers utilized the Zutell and Raskini (1991) prosody rubric both pre and post intervention in the experimental and control group. Students listened to their partner read as part of the repeated reading intervention. Modeling and discussion of the rubric categories and “look for” were demonstrated during the first week of implementation. Students were given a copy of the Multi-Dimensional Rubric and asked to provide feedback and “score” their partner readers. Students were instructed to listen carefully and to follow along looking for the elements listed. Teachers in the study, using the reading for the ORF, also scored the students prior to implementation and then following the conclusion of the study. In order to have an accurate measure, staff utilized their iPad to record students reading and then scored students at a later time to have a reliable measure. Analysis of the data allowed for the researcher to determine

change, if any, in either group.

Students for the study were identified using SRI scores and the North Carolina EOG reading test data. The North Carolina EOG reading tests were used as baseline measurements to determine likely candidates to include in the study. Since this assessment is utilized as an overall comprehension tool and a high-stakes test on 1 day, the use of the SRI was also used as a tool to provide multiple data points. This test is typically administered at a minimum of twice a year.

The SRI Research Summary (Scholastic, n.d.) stated that SRI is a criterion-referenced test designed to measure reading comprehension to match students to appropriate reading material. Scores are reported as Lexile measures which range from Beginning Reader (less than 100L) to 1500L. The summary also indicates that Lexile uses a common metric – Lexile measure – to assess both the readability of a text as well the ability of the reader. The SRI Research Summary (Scholastic, n.d.) indicated this allows the reader to be placed more appropriately for their reading ability.

The Lexile framework is designed so that students place into a Lexile level with the ability to read 75% of the book without support. The measure uses a combination of word frequency and sentence length to determine the book's Lexile score. This allows students to read for challenge and growth and is identified as "target reading" (MetaMetrics, n.d.). The following was given as guidelines for grade equivalence though it is noted by Lexile that the ranges are designed for individuals not class norms. Students for this study were selected from grade bands below their grade level. For the purpose of this study, students who fell below 860L to approximately 400L were selected for initial screening. Students who fell in the lowest scale have reading issues that are better addressed by a scripted reading intervention program due to possible decoding

issues; 860L was designated the appropriate reading level for students entering the sixth grade.

Students were screened through the use of the R-CBM portion of AIMSWeb©. AIMSWeb© provides standardized R-CBMs for ORF and MAZE. The administration of the fall benchmark for R-CBM also assisted in identifying students who were candidates for the use of the repeated reading intervention to increase fluency. The measurements were compared to national norms utilized by AIMSWeb© to create a list of students who needed fluency intervention.

Students were randomly assigned, once identified as candidates for intervention, to either an experimental group or a control group. The students were listed based on the baseline data and screened using the AIMSweb© benchmark. Utilization of the benchmark was meant to allow only the students who fell below the target level for reading fluency to be placed into the study. Using Excel, students were listed in a spreadsheet and assigned a number. Random assignment was determined after the baseline scores were obtained. The assistant principal of the school made the assignments based on the students' scores only. The goal was for 15 students to be assigned to each group, but due to issues with student permission forms not being returned, the final data did not have consistent results with regards to the number of students assigned per group. Efforts were made to have equal groups. The return rate of the permission forms and assignment to groups are below.

Table 7

Number of Male and Female Participants by Control and Experimental Group

	Control Sixth Grade	Experimental Sixth Grade	Control Seventh Grade	Experimental Seventh Grade
Males	5	6	7	7
Females	7	7	3	8

Data for WRCPM, MAZE, and the initial prosody scale were used as the pretest score for data analysis. Students who were part of the study utilized a scripted repeated reading program. The program provided the following instructions to help ensure that the repeated reading intervention was administered in a consistent manner. Teachers using the program met with the researcher to receive training and practice on how to implement through a 1-hour professional development workshop. The program suggestions of instruction in implementing the program were as follows:

1. Monday – All partnerships have new Practice Passages. Partners previewed the entire passage for accuracy by whisper-reading or silently reading, underlining unknown words. Teacher monitors and identifies any words unknown to either partner. Utilizing Option 2 – Teacher will allow 10-15 minutes on Mondays for partners to first preview their Practice Passage for accuracy. Then, conduct partner fluency practice during the allotted 6 minutes. Added to the study was also the rating of the partner's prosodic reading through the use of Zutell and Rasinski's (1991) Multi-Dimensional Prosody Rubric. Every student in the experimental group had a folder which included a paper copy of the rubric in which they were instructed to score

each category and share their results.

2. Tuesday-Thursday – Students were to repeat the previous day instructions.
3. Friday – Partners turn in the week’s Practice and graph results for accuracy, rate, and prosody on the appropriate graphs (Adams & Brown, 2007, p. 8).

Teachers also practiced utilizing the Multi-Dimensional Fluency Scale (Zutell & Rasinski, 1991) prior to administering it as a pretest for inclusion in the study. During a 2-hour meeting with the researcher, all staff members in the study worked to learn the rubric and how to have a consistent rating.

Prior to the beginning of the school year, the teaching staff who implemented the intervention and provided feedback met to determine inter rater reliability. A total of six students, three sixth-grade students and three seventh-grade students, were selected to read a CBM passage from easyCBM.com. The passages had not been reviewed or read previously by students in the group. Students selected to read the passages were identified in reading ability from BR (Beginning Reader – poor decoding skills) to above grade level/grade-level readers with a high Lexile level. This allowed the teachers to see how the rubric varies based on the ability of the reader. Students representing high, medium, and low reading abilities were selected to read the passage and recorded using an app on the iPad by the Exceptional Children’s teacher. Staff members using the prosody rubric met and reviewed the rubric with the researcher prior to listening to students. The researcher discussed each aspect of prosody and reviewed each element of the rubric discussing what to listen for as well as allowing the teachers to discuss and ask questions. Once everyone had come to an agreement on each element, each passage was reviewed. The recordings were scored separately and then discussed. The teachers discussed areas of differences and ratings defining misconceptions and determining

common terms from the rubric and how they should be presented in a prosodic reader. This was repeated with all six readers after the initial review to allow the raters to determine reliability. After listening to each audio clip, teachers were allowed to dictate their own rating and then share out loud with the group. Discussion occurred to discuss any major differences with a goal of having no more than one point difference in most of the reading. Teachers in both the control and experimental group participated as a measurement on the influence of repeated reading intervention in the experimental group and wide reading of text selected by the teacher on the control group.

Due to the study starting at the beginning of the year, it did not start until the second week of school with the preassessment given by each teacher. Due to the individual nature of the ORF, this took approximately two weeks to complete as it was conducted one on one. The repeated reading intervention was then allowed to run for a total of 7 weeks. The post assessment repeated the administration of the ORF, MAZE, and utilization of the prosody rubric to determine the gain, if any.

Analysis

This was a quantitative study that measured the effect of repeated reading between two control groups. Multiple Analyses of Covariance (ANCOVA) was used to answer the three research questions. In all cases, the independent variable was the group, experimental or control, and the covariate was the pretest. Gain scores were the dependent variables. The study used the pretest and posttest data to determine what statistical change, if any, occurred as a result of implementing the repeated reading program on each of the four elements of speed, accuracy, comprehension, and prosody.

Limitations

Due to the design of this study, several limitations are noted by the researcher.

The study utilized repeated reading as the form of intervention. While there is substantial evidence regarding the effectiveness of repeated reading, there are other effective means of providing fluency interventions. A second limitation is noted as the students who received the intervention were identified as struggling readers. This study did not include readers who would be deemed as grade level or above; and any results would only be indicative of assisting students who are not on grade level, rather than a wide range of students. The instrument used for measuring prosody cannot measure the direct elements of prosody. The use of a rating scale required the user to make a decision regarding the appropriate measurement of a student's prosody based on their professional judgment and training for inter rater reliability. While the instrument has been validated, there is still room for human influence regarding the interpretation of the reader's prosody.

Other limitations were the size of the study group. While this study included more students than others noted in the literature review, a larger population assists with providing multiple measures. The time frame was also limited. Allowing more time for the study would allow researchers to see the effect as there were several issues with time and interruptions in the current study. This may have affected the outcome of the results.

Anticipated Outcomes

Utilization of a systematic repeated reading process was used to assist students with reading fluency. Students had the ability to visually and graphically represent the change in their fluency through graphing their own performance while using the prescribed intervention. Students were able to see a positive or negative trend in fluency by graphing their results. Students received feedback from their peers using Zutell and Rasinski's (1991) Multi-Dimensional Fluency Scale. Use of the scale was designed to help students visually graph positive or regressive trends in prosody. Students had a

guide to provide them direction on what elements needed attention in regards to prosody. It was anticipated that students would increase their ORF as measured by CBMs in the area of WRCPM as well as increasing their overall comprehension scores pre and posttest as measured by the MAZE. It was further anticipated that by using repeated reading, the reader's prosody would increase as they practiced the passage with feedback from their partners. By having consistent practice with a form of feedback, it was expected that students would use the feedback to address the identified areas as a result of increased speed and accuracy.

Summary

Fluency has been researched at the elementary level in various settings and using a variety of different interventions. This study specifically looked to determine the value, if any, of emphasizing repeated reading and prosody instruction as it affects fluency, specifically for middle grade students. Since middle grades was limited in the amount of research available, this study attempted to add to the body of current research regarding repeated reading and its effect upon older readers.

Chapter 4: Data Analysis

The purpose of this study was to measure the impact of a repeated reading intervention on the fluency of sixth- and seventh-grade students who were identified as readers performing below their current grade level. This study examined the benefits and limitations of using repeated reading as a fluency intervention for middle school students identified as below grade level. Effectiveness of the repeated reading fluency intervention was measured statistically comparing a control and experimental group using instruments for accuracy, rate, comprehension, and prosody. Effectiveness was measured by using gain to determine if change was statistically significant.

Demographics of the Survey Samples

The use of a control and experimental group was utilized. Students were sixth- and seventh-grade students in a middle school in Western North Carolina. A total of 11 students were assigned to the control group for sixth grade. Of the 11 students, one student received Exceptional Children's Services (EC) and one student was designated as an English as Second Language student (ESL). A total of 14 students participated in the experimental group with four students receiving EC services. Students in the seventh-grade control group had a total of 11 students who participated in the data collection with four students designated as EC. In the experimental group in seventh grade, a total of 15 students were part of the research process. Of the 14 students in the group, three students were designated as receiving EC services and two students were identified as ESL. The table below provides a demographic breakdown of gender by group.

Table 8

Number of Male and Female Participants by Control and Experimental Group

	Control Sixth Grade	Experimental Sixth Grade	Control Seventh Grade	Experimental Seventh Grade
Males	5	7	8	7
Females	6	7	3	8

Students included in the study were identified in two ways. Lexile scores were used to identify students as candidates, and assignment to control and experimental groups were made randomly after being identified within the target range of 400-700 Lexile. Students were required to return the Consent for Participation in order to be included in the study. Lexile levels are designed to measure the difficulty of text by utilizing the characteristics of word frequency and sentence length (Stenner, Burdick, Sanford, & Burdick, 2007). Utilizing a variety of measures, Lexiles have been compared to a variety of norm-referenced tests specifically designed to measure comprehension. Lexiles have shown a .90 correlation between the measurement provided by the North Carolina EOG tests in Grades 3, 4, 5, and 8 (Stenner et al., 2007).

Data Collection

Data collection occurred by employing CBM and the Multidimensional Fluency Rubric created and researched by Zutell and Rasinski (1991). Students were identified as below grade level by Lexile scores as measured by the use of a commercial product – SRI. Use of this data allowed students to be divided into a control and experimental group according to their grade level.

A total of four groups were created with one teacher assigned to each group.

Each teacher had a degree in middle grades with a license in language arts. The two teachers who were assigned to the experimental group both had a Master's degree. The sixth-grade experimental teacher had a Master's in Reading Education and the seventh-grade experimental teacher had a Master's in Education. One of the teachers assigned to the control group was designated a National Board Certified teacher, and the remaining teacher was designated as a second year Beginning Teacher in her first year teaching language arts. She had student taught language arts previously to her first year.

Prior to the implementation of the study, all four teachers met with the researcher to participate in a validation study to use the Multidimensional Fluency Rubric (Zutell & Rasinski, 1991). The purpose of the study was to ensure that teachers had a common understanding of each of the categories and that students would receive similar ratings even though there were four teachers in the study. The researcher briefly reviewed the prosody rubric and discussed characteristics that each category was designed to measure. A total of six students were previously recorded reading a timed oral reading passage similar to the passages used in the study. The passages reflected the type of passages that would be used for the WPM and used as the pre and posttest instrument. At the conclusion of the validity study, a consistent rating in most categories was achieved with only one point difference in specific categories (Appendix A).

Teachers administered the pretest and posttest for ORF. The purpose of the assessment was to measure reading rate gains as noted by WPM and accuracy. The assessment was administered prior to the implementation of the repeated reading intervention and following the conclusion of the intervention to the control and experimental groups. The R-CBM consisted of a timed reading passage. Students were given 1 minute to read the passage. Teachers recorded students' errors and the calculated

the words read per minute by subtracting errors from the total number of words read. This also provided the accuracy of the reading. Errors consist of omitting a word, failing to pronounce a word within 3 seconds, and omitting an entire line. At the end of 1 minute, students must stop. This measurement indicates the reading rate for the student. In order to have a valid measurement, this process was repeated with three passages of like difficulty and a median score utilized as the WPM.

Use of a MAZE CBM was utilized to measure comprehension gains for both pre and posttest. A MAZE CBM consists of 150-400 words in a reading passage. The first sentence of the passage is left intact with the seventh word in each sentence following being deleted and replaced with three choices. Each of the choices are given thought with one distracter of the same type (adjective, noun, verb) but would not make sense if selected for the passage. The other choice is a far off distracter which would not make sense in the passage. Students are given 3 minutes to select as many correct words as possible. This is repeated three times pre and posttest (Shinn & Shinn, 2002).

Prosody gain was measured utilizing the Multidimensional Fluency Scale by Zutell and Rasinki (1991). Kuhn and Stahl (2003) described prosody as “reading expressively with such features as appropriate pitch, stress, and phrasing” (p. 5). The rubric designed by Zutell and Rasinki (1991) specifically looked at the elements of expression and volume, phrasing, smoothness, and pace. Each category was given a scale from 1-4. Students given a 1 have a low rating and students with a 4 have a high rating. Prosody is determined by adding all four categories together for a summative rating. A high score in a category or overall substantiates strength in that category or overall prosodic reading. Rasinki (personal communication, 2014) indicated that a total of 11 or higher is seen as having prosodic reading. Students were rated at the conclusion

of reading the R-CBM passage by the assigned educator to determine the pretest score. This was repeated, continuing to utilize the R-CBM reading, for the posttest score. During the intervention phase, students were asked to rate their peers prior to practicing the repeated reading passage and at the conclusion of the week. This was charted using the Zutell and Rasinki (1991) Multi-Dimensional Fluency Rubric that was written in kid-friendly language. The rubric was provided by Rasinki through personal communication with the researcher (Appendix B).

Permission to conduct the research was obtained from the district superintendent and the current principal of the school (Appendix C). Students were then placed into control and experimental groups randomly based upon their SRI Lexile levels. These levels ranged from between 496L-714L for students in sixth grade and 426L-765L in seventh grade. This represented a target group that was beyond basic reading skills but below the designated grade-level reading Lexile of 800L. Students were assigned to groups of 15 respectively for each group. While groups were assigned with 15 students, only students who provided written consent for their data to be included in the study were utilized. A Consent to Participate was secured from parents and students in the group (Appendix D). The following represents the rate of return.

Table 9

Rate of Return for Consent to Participate

	Control		Experimental	
Sixth Grade	11/15	73.3%	14/15	93.3%
Seventh Grade	11/13	84.6%	15/16	93.5%

Teachers participating in the study were given copies of the permission form and

students were asked to return the form to the appropriate instructor in the study. Contact was made by teaching staff who participated to secure forms not returned.

Initial Data

ORF pretest scores ranged from 65-174 WPM for the control group and from 56-160 WPM for the experimental group. MAZE pretest scores ranged from 9-24 for the control group and from 9-29 for the experimental group. Prosody scores had a range of 4-15 for the control group and 6-16 for the experimental group. Means and standard deviations by group can be seen in Table 10.

Table 10

Means and Standard Deviations of Dependent Measures at Pretest

Measure	Control Group		Experimental Group	
	Mean	St Dev	Mean	St Dev
ORF	110.4	24.3	113.0	23.2
MAZE Comprehension	14.6	4.1	16.7	4.5
Prosody	9.9	2.7	11.0	2.4

Two-sample t tests were performed on the three dependent measures to assess initial group differences. Results indicated there was no statistically significant difference between the groups at pretest for any of the dependent measures (Table 11).

Table 11

Results of t Tests to Assess Initial Group Differences

Dependent Variable	df	T	P
ORF	49	-0.38	0.7042
MAZE Comprehension	49	-1.63	0.1094
Prosody	49	-1.58	0.1214

Effects of Repeated Reading Intervention on ORF (WPM)

Research Question 1 asked, “How did the use of repeated reading impact the fluency of middle grade students in sixth and seventh grade identified as reading below grade level?” To determine the effects of repeated reading intervention on the rate of students in the control and experimental group, students were administered a CBM requiring students to read for 1 minute. Based on research such as the National Reading Report (NICHD, 2000) and the Theory of Automaticity (LaBerge & Samuels, 1974), it was expected that WPM would increase for students who participated in the repeated reading intervention in addition to reading a novel as opposed to those in the control group who participated in reading a novel only. To determine if the repeated reading had an impact, an ANCOVA was used to determine if there were group differences in gains between the pre and posttest administration of the CBM measuring reading fluency. The ANCOVA indicated that there was not a statistically significant difference between the experimental and control group on the fluency gain score, $F(1,48)=2.56$, $p=0.1165$ (see Table 12).

Table 12

ANCOVA on Gain Score for Reading Rate Using Pretest as Covariate

Source	df	SS	MS	F	P
Pretest	1	180.17	180.17	1.77	0.1899
Treatment Group	1	260.36	260.36	2.56	0.1165
Error	48	4891.12	101.90		
Total	50	5356.63			

One-sample t-tests assessing the null hypothesis that each group's mean gain was equal to zero. While implementation of the repeated reading intervention did not yield a statistically different impact between the two groups, further analyses, using the adjusted means did indicate that both the experimental and control group showed significant gains over the course of the research in their reading rates, $p < .0001$ for both groups; however, these gains were not significantly different from each other. The table below illustrates the change in mean over the 7-week implementation period.

Table 13

Mean Scores for WPM

Treatment Group	Pretest WPM			Posttest WPM			WPM Gain		
	Sample Size	Mean	SD	Sample Size	Mean	SD	Sample Size	Mean	SD
Control	22	110.4	24.3	22	125.9	26.1	22	15.5	9.3
Experimental	29	113.0	23.2	29	123.7	22.2	29	10.7	10.8

Effects of Repeated Reading Intervention on Comprehension

The second research question focused on what the impact was of repeated reading on the participating students' comprehension. The use of a MAZE CBM was used to

determine changes in student comprehension from pretest to posttest. An ANCOVA was calculated to determine differences in the gain scores for the two groups, controlling for pretest. There was no statistically significant difference between the control and experimental groups after implementation of the repeated reading intervention, $F(1, 48)=0.37$, $p=0.5477$ (see Table 14).

Table 14

ANCOVA on Gain Score for MAZE Using Pretest as Covariate

Source	df	SS	MS	F	P
Pretest	1	0.11	0.01	0.01	0.9429
Treatment Group	1	7.50	7.50	0.37	0.5477
Error	48	982.30	20.46		
Total	50	990.75			

Further analyses, using the adjusted means, indicated that both the control and experimental groups showed statistically significant gains during the implementation of the repeated reading intervention, $p=0.0001$ for the control group and $p<0.0001$ for the experimental group. The gains were once again not statistically significant. Table 15 displays the mean scores by group.

Table 15

Mean Scores for MAZE CBM Illustrating Comprehension Gain

Treatment Group	Pretest MAZE			Posttest MAZE			MAZE Gain		
	Sample Size	Mean	SD	Sample Size	Mean	SD	Sample Size	Mean	SD
Control	22	14.6	4.1	22	18.7	6.8	22	4.0	5.6
Experimental	29	16.7	4.5	29	21.5	5.9	29	4.9	3.5

Effects of Repeated Reading on Prosody

Research Question 3 focused on what the impact was of repeated reading on the participating students' prosody. Students were asked to rate each other at the beginning of the passage and then at the conclusion of the repeated reading passage each week. Students would rate their peer and provide feedback on each of the four categories listed on the Zutell and Rasinski (1991) Multidimensional Fluency Rubric. Teachers implementing the repeated reading produced a pre and posttest score utilizing the same rubric to measure change in gain by using the passage to measure WPM. An ANCOVA was utilized to assess differences in the prosody gain scores using the pretest as a covariate. The results indicated that there were no statistically significant differences between the control and experimental group, $F(1, 48)=0.20$, $p=0.6557$.

Table 16

ANOVA on Gain Score for Prosody Using Pretest as Covariate

Source	df	SS	MS	F	P
Pretest	1	93.79	93.79	32.18	<.0001
Treatment Group	1	0.59	0.59	0.20	0.6557
Error	48	139.92	2.91		
Total	50	242.51			

Both groups demonstrated statistically significant gains ($p<0.001$) in their overall prosody scores from pretest to posttest following the intervention period as illustrated through the use of mean scores.

Table 17

Mean Scores for Prosody Rubric

Treatment Group	Pretest Prosody			Posttest Prosody			MAZE Gain		
	Sample Size	Mean	SD	Sample Size	Mean	SD	Sample Size	Mean	SD
Control	22	9.9	2.7	22	11.9	2.2	22	2.0	2.4
Experimental	29	11.0	2.4	29	12.2	2.0	29	1.2	2.0

Effects of Treatment of Control and Experimental Compared by Grade Level

An analysis was used to evaluate how the treatment not only affected the control and experimental groups but also to evaluate the effect by grade level for each research question. The focus of the analysis was to specifically consider if a specific grade demonstrated a gain in scores that was statistically significant as a result of the repeated reading intervention. The pretest was used as the covariate.

There were no statistically significant differences in gains between the control and experimental by grade level, $F(4, 46)=2.21, p=0.1438$. Analysis of the data indicated that there were no statistically significant gains as a result of being in a particular grade level or group.

Table 18

ANOVA on Gain Score for Reading Rate by Treatment Group and Grade

Source	df	SS	MS	F	P
Pretest	1	227.14	227.14	2.30	0.1364
Treatment Group	1	215.92	215.92	2.18	0.1463
Grade	1	218.69	218.69	2.21	0.1438
Grade X Treatment Group	1	174.07	174.07	1.76	0.1911
Error	46	4547.56	98.86		
Total	50	5356.63			

An ANCOVA was used to analyze the gain for comprehension as measured by the MAZE CBM. This ANCOVA continued the previous analysis format of comparing grade to grade as well as control and experimental within the grade level. The analysis showed a statistically significant difference for the sixth grade compared to the seventh grade in the area of comprehension, $F(4, 46)=13.36$, $p=0.0007$. There continued to be a pattern of gain for the control and experimental groups.

Table 19

ANOVA on Gain Score for Comprehension by Treatment Group and Grade

Source	df	SS	MS	F	P
Pretest	1	4.42	4.42	0.28	0.5971
Treatment Group	1	19.71	19.71	1.26	0.2669
Grade	1	208.42	208.42	13.36	0.0007
Grade X Treatment Group	1	86.63	86.63	5.55	0.0228
Error	46	717.84	15.61		
Total	50	990.75			

When breaking down the data by grade level using the Least Squares Means, only the seventh-grade control group failed to show a significant change.

Table 20

Least Square Means of Treatment Group and Grade of Gain Score

Source	Grade	LS Mean	SE	P
Control	6	7.09	1.14	<.0001
Control	7	0.20	1.30	0.8758
Experimental	6	5.60	1.06	<.0001
Experimental	7	4.30	1.07	0.0002

The final analysis used an ANCOVA to measure the difference between grade levels and groups for prosody. The ANCOVA continued to measure the change in gain based on the pretest as the covariate. There were no statistically significant differences between grade levels $F(4,46)=1.10$, $p=0.2995$. There continued to be statistically significant gains for each grade level except for seventh grade control, $p>0.0622$.

Table 21

ANOVA on Gain Score for Prosody by Treatment Group and Grade

Source	df	SS	MS	F	P
Pretest	1	96.71	96.71	33.29	<.0001
Treatment Group	1	0.22	0.22	0.07	0.7860
Grade	1	3.20	3.20	1.10	0.2995
Grade X Treatment Group	1	4.02	4.02	1.39	0.2453
Error	46	133.66	2.91		
Total	50	242.51			

Summary

The results of the ANCOVA indicated there were no statistically significant differences from pretest to posttest between the control and experimental group due to implementation of the repeated reading intervention. Though the experimental group did

not indicate statistically significant differences from the control, it is noted that both groups did show significant gain over the course of the implementation.

There was no significantly statistical difference for the area of reading rate as measured by WPM by grade level and group. Data indicated that sixth grade did have a statistical difference for comprehension as measured by the MAZE CBM including a pattern of growth in the area of gain. There were no statistically significant differences noted in the measurement of prosody by grade level but the data did indicate that seventh-grade control failed to show a significant gain by grouping.

Chapter 5: Conclusions, Discussions, and Recommendations

Biancarosa and Snow (2006) stated that adolescent readers often can be identified in two categories: the first being students who have difficulty reading words accurately. This has been noted as a small range of students. The second group of readers Biancarosa and Snow described are students who do not read words with a percentage of accuracy and fluency that allows them to focus on comprehension. This can be contributed to the fact that while reading strategies have been introduced and utilized, students have not been given sufficient time to practice and master the skill with a more comprehensive and demanding range of text. This is further compounded by the increase in informational text that is a large segment of adolescent coursework (Biancarosa & Snow, 2006).

The purpose of this study was to determine the impact of a repeated reading intervention on the fluency of sixth- and seventh-grade students. This intervention was selected to address the concerns of preparing students for a workforce reading level that demands a large amount of nonfiction and technical reading. It was also selected as a means to address the challenges of CCSS (2010) which require students to read 70% nonfiction by twelfth grade. The goal was to assist students who are below grade level use a skill-based intervention that would assist them in bringing up their current Lexile level.

Students selected to participate were identified as readers performing below their current grade level. The study specifically addressed three elements of reading fluency including reading rate measured as WPM and accuracy, comprehension, and prosody. The relationship between fluency and comprehension has been researched and well-established as illustrated in studies from Fuchs et al. (2001), Pinnell et al. (1995), and

Schatschneider, Fletcher, Francis, Carlson, and Foorman (2004). The researcher hypothesized that using a research-based intervention such as repeated reading would increase not only student reading rates but also increase overall student comprehension for those who received the treatment. It was further hypothesized that by utilizing repeated reading, students would also increase their overall prosody when given the opportunity to monitor through peer feedback. Prosody has shown to also be connected to how well a student understands a given text.

The research process used CBMs and the Multidimensional Fluency Rubric (Zutell & Rasinski, 1991) to measure the gain in a pretest/posttest study to determine the effectiveness of the repeated reading intervention.

The research questions for the study were

1. How did the use of repeated reading impact the fluency of middle grade students in sixth and seventh grade identified as reading below grade level?
2. What was the impact of repeated reading on the participating students' comprehension?
3. What was the impact of repeated reading on the participating students' prosody?

Findings and Interpretations

Repeated Reading and the Impact on ORF

The first research question focused on the idea that employment of repeated reading as an intervention would have a positive effect on ORF as measured by gain. This effect would be measured by comparing the change in gain between the experimental group and the control group. The expectation was that the experimental group would show a statistically significant difference in the WPM gained in relation to

the students who read a novel only. Based on the previous research and literature review, indications were the reading rate would increase through the utilization of repeated reading intervention.

The data did not support this hypothesis, and there were no statistically significant differences noted between the group receiving the intervention and the group reading a novel. The data showed that both groups increased their reading rates regardless of the grouping and use of the intervention. Further analysis specifically examined gain by grade level to examine if grade level had any type of effect. It was noted in the ANCOVA comparing groupings and grade level that grade level also failed to have any type of impact on increasing the gain for WPM. In comparing the groupings by grade level, students continued to show statistically significant growth regardless of the grade and assigned grouping and implementation of the intervention.

While the results did not show a statistical gain, there is still value in exploring the use of repeated reading in middle grades. There is a prodigious amount of research that supports the use of repeated reading as an effective means of intervention. The National Reading Panel (NICHD, 2000) through its meta-analysis established that reading fluency is an issue that needs attention if students are to successfully master text. Review of the literature also establishes that the theory of repeated reading is well-grounded and that substantial studies have been conducted that illustrate its effectiveness in addressing issues with reading fluency. Therrien (2004) stated, "Repeated reading can be used effectively with nondisabled students and students with learning disabilities to increase reading fluency and comprehension on a particular passage and as an intervention to increase overall fluency and comprehension ability" (p. 252).

Therrien (2004) specifically investigated the effects of repeated reading by

researching its effects on disabled and nondisabled readers ranging from kindergarten to twelfth grade. In a meta-analysis of 18 studies, Therrien also analyzed repeated reading and its ability to transfer (the ability to comprehend and read after reading multiple passages different times) or nontransfer (the ability to comprehend and read after reading the same passage multiple times). Utilizing Cohen's (1988) effect size, the nontransfer had an effective size of $ES=0.83$ and transfer had an effective size of $ES=0.50$. Therrien continued by stating that the interaction of the adult played an integral role in the positive outcome of the repeated reading intervention. Therrien encouraged high adult interaction in which the adult should provide the feedback rather than the peers as completed in this study. He also indicated that cuing students to focus on either rate or speed also increased the likelihood of increased effect. Related to this particular study, it is noted that due to the size of the group and the limit of the staff, there were limited interactions between the student and the teachers involved in the repeated reading intervention. As shown in the Therrien study, this could be one factor in addressing the lack of growth in the study specific to the experimental group.

One of the challenges of reading fluency and adolescents is the limited research that has been conducted for this particular age group. Therefore, the majority of the research and referenced literature involved students who are in elementary school or identified as disabled readers (Barth, Catts, & Anthony, 2008). Barth et al. (2008) indicated that fluency is built on the correlation between automatic recall of sight words and text reading. Research indicates that both are highly correlated. Research also supports that four factors, which were measured in this study as WCPM, are important to fluency. Those are identified as word reading accuracy, naming speed, working memory, and language comprehension (Torgesen, Rashotte, & Alexander, 2001). Repeated

reading is designed to encumber all of these concepts and provide a means for students to practice those identified categories and increase recall of sight words and text meaning.

Barth et al. (2008) conducted an investigation with 527 eighth-grade students that specifically measured each of the four factors: word reading accuracy, naming speed, working memory, and language comprehension. The results indicated that an adolescent's ability to retrieve phonological information from long-term memory played a significant role when explaining why there are such differences in reading fluency. Barth et al. (2008) suggested that "decoding, language comprehension, and naming speed account for a significant portion of the unique variance in reading fluency" (p. 584). This in turn indicates that decoding is a strong variable in adolescent fluency. They further stated that language comprehension or the processing of meaning helps readers to create mental representations when connecting meaning to words. Finally, the ability to rapidly name has a significant impact in founding fluency. Barth et al. (2008) continued by stating that while this is correlated to rapid automatic naming (RAN), there is limited research to suggest its connection. They stated that rather than using repeated reading for older students, it is recommended that there should be more of a focus on wide reading which increases vocabulary, mental images, and processing which all relate to automaticity theory. The study conducted by Barth et al. (2008) provided support to the literature referenced throughout the study that repeated reading is an intervention that could have positive effects on study. It further supported the concepts that fluency is relevant for adolescents since much of the previous research has focused heavily on elementary readers who are in the developmental stages of reading or students with learning disabilities.

While there is ample evidence to support the construct that fluency is connected

to the idea of rate and speed, Logan's Theory of Automaticity (1988) stated that as a student increases speed due to automaticity, this is correlated with accuracy as a result of practice. Logan (1997) later addressed this idea by stating that the increase in speed is not limitless. Speed is related to the learning curve which follows the idea of "power law" which "states that reaction time decreases as a function of practice until some irreducible limit is reached. Speed increases throughout practice, but the gains are largest early on and diminish with further practice" (Logan, 1997, p. 123). This may be associated with adolescent readers. Since early fluency is measured with beginning readers who typically make large gains in a small amount of time, the same type of gain is not seen in older readers who encounter more difficult vocabulary and text. It may be unreasonable to expect to see a large increase in adolescent readers since the focus is now on larger chunks of text that are not as repetitive and include more challenging vocabulary. Kuhn, Schwanenflugel, and Meisinger (2010) also substantiated this claim:

In terms of connected text, the power law can be seen in Hasbrouck and Tindal's (2006) oral reading fluency norms; for example, between winter and spring of the first-grade year students at the 50th percentile increase their reading rate approximately 30 correct words per minute, whereas their peers in the eighth grade gain only 18 correct words per minute over the entire school year and the gains for adult skilled readers, who have reached asymptote, are infinitesimal. (p. 231)

This also correlates with Chall's (1983) Stages of Reading Development which indicated students at stage 2, which is typically second and third grade, have a greater increase in fluency. Students who fall within the third stage of development begin to transition to reading for understanding with an increase in vocabulary and context. The

earliest texts are typically designed specifically for teaching students how to read with limited focus on comprehension. Passages are frequently repeated with a focus on sight words and word identification. As students' progress through the stages of reading, Logan's (1997) theory supports the idea that students may show less gain in speed as they encounter the "power law" (p. 125).

While research exists to support the use of repeated reading to increase automaticity and rate, there is also research that questions the effectiveness of repeated reading in regards to fluency. Kuhn and Stahl (2003) completed a meta-analysis of repeated reading. The study reviewed 15 studies which included a control group. The analysis utilized a vote count to give weight to the studies and determine their effectiveness. Vote counts simply compare the number of studies that indicate a positive outcome to the number of studies that indicate a negative outcome. The first count measured if repeated reading showed any effectiveness. In six studies, repeated reading had a greater effect than the control, eight studies indicated no effect, and one study indicated that it did affect familiar passages but not on isolated passages which students had not had previous exposure. The second vote counting procedure focused specifically on single comparisons. The researchers indicated that this gave more value to studies that used multiple comparisons. In the second vote count, eight of the comparisons indicated the repeated reading group had a significant improvement over the control group. In 21 of the comparisons, the repeated reading group did not have a significant improvement. The researchers concluded that overall repeated reading did not produce significant change over the control. Kuhn and Stahl continued by hypothesizing that this may have correlated to the control group's design. The analysis indicated that in some of the studies, they utilized the concept of the present study which is a no-treatment control

group and other control groups required that students read the same type of “connected text” as the intervention group but without repeated reading.

Khun and Stahl (2003) further asserted that their meta-analysis indicated that repeated reading should allow students to quickly identify words as supported by LaBerge and Samuels’s (1974) Theory of Automaticity. They continued by stating that while there does seem to be a correlation to comprehension, there is little to no research to support that it does increase the ability of a reader to recall words any faster after implementation.

Menon and Hiebert (2011) suggested that repeated reading may not have a substantially significant impact due to the process but rather due to the exposure to increased text and time that students may not have encountered previously. Therefore, the impact of the repeated reading intervention may be that exposure rather than the focus on increasing automaticity through practice.

The studies quoted above indicate that there are continued questions regarding the use of repeated reading with adolescents when specifically looking at rate and accuracy. In regards to the results of this study, it does support the fact that the results only showed a small increase in comprehension. As students move into a higher grade level, the ability to increase fluency may be more the result of exposure to more vocabulary and text as suggested by Menon and Heibert (2011) as well as the correlation to Chall’s (1983) Stages of Development. Khun and Stahl’s (2003) meta-analysis also indicated that the design of this study inhibited the repeated reading from being more effective as their research indicated that more interaction with the adult and student was needed in the form of feedback. Fluency instruction has been predominant in the early elementary years; and while empirical research has indicated that fluency has a positive effect on

elementary students' comprehension, the effect is limited with older students who demonstrate mixed results (Denton et al., 2011). This study also relates to literature quoted in the literature review which also indicates that as students increase in age, there is a noticeable decrease in the sensitivity to the traditional measures for WCPM as well as MAZE. The results of this study correlate with the mixed results that have been quoted above.

When looking at the mean scores, the experimental group did have a higher mean on the pretest at 113 versus the control group with 110. This might have attributed to the larger increase in the posttest mean for the control of 15.5 compared to the experimental group's increase of 10.7. There were also more participants in the experimental group as compared to the control group. Hasbrouck and Tindal (2006) created a listing of norms that utilized students from districts representing a variety of students ethnically, socially, and demographically. In their revised norms, they compiled data from first grade through high school as well as abilities ranging from advanced readers to those with disabilities. These norms are regularly referred to as a means to determine the placement of a student in regards to making progress or needing assistance. Hasbrouck and Tindal strongly suggested that students be viewed as on grade level at 50th percentile if they fall 10 above or below that level. Students beginning with a higher WPM may be significant as the students in the study did start with a relatively strong reading rate in the 100 WPM. Students in the fall norms in Grade 6 should be at 127 WPM, and students in the seventh grade should be at 128 WPM. While the student means indicate that they were still below the suggested norms, it is noted that there may have been students included in the study that were closer to the appropriate reading rate which prevented a greater increase due to the implementation of the intervention.

Repeated Reading and the Impact on Comprehension

The second research question focused on what type of impact a repeated reading intervention would have on the overall comprehension of an at-risk reader.

Comprehension was measured employing a CBM entitled MAZE. MAZE is designed to have students read three passages in which every seventh word is deleted. Students must choose from the three choices with two being distracters. The data did not support the repeated reading intervention as having a statistically significant difference between the experimental and control groups. It was anticipated that the repeated reading intervention would have assisted the experimental group in making significant gains in their overall comprehension versus the control group who participated in reading a novel.

Comparing the mean scores of the experimental group to the control, the experimental group once again started with a higher overall mean of 16.7 versus the control group which began the research at 14.6. The overall change in mean was higher for the experimental group of 4.9 compared to the control group's mean of 4.0. In both instances, there was significant growth for both groups regardless of the implementation of the repeated reading intervention. AIMSWeb© suggested that students should have a minimum score of 21 during the fall benchmarking for sixth grade and 22 for seventh-grade fall benchmarking.

It is noted that when comparing the sixth-grade groups to the seventh-grade groups, an ANOVA indicated there was a significant difference for sixth graders versus the seventh graders showing that there was more improvement for the sixth-grade students. This may indicate that there is promise for the treatment. One theory may be that seventh-grade students had less sensitivity to the treatment due to similar repeated reading interventions being used in class during their sixth-grade year.

The results once again did not match the research that connects the concept of fluency and comprehension. In their article, Shinn, Good, Knutson, Tilly, and Collins (1992) stated, “decoding affects comprehension; comprehension does not affect decoding” (p. 460). Conducting their own study to validate the connection of fluency and comprehension as measured by CBMs, Shinn et al. stated that the evidence from their study supports Chall’s (1983) Stages of Reading development included in the literature review of this study as well as the validity of using CBMs to measure comprehension. Furthermore, research has shown that fluency is highly correlated to comprehension (Fuchs et al., 2001).

The National Reading Report (NICHD, 2000) specifically broke down the connection between fluency and comprehension relating it back to the concept of automaticity. The National Reading Report stated that reading is broken down specifically into two categories: recognition of printed words by association of letter and sounds with the second category being associating meaning with the words. In simple terms, a reader must decode and comprehend the text. The National Reading Report also stated that this stage should not always be associated with just beginning readers:

Being an “automatic” or “fluent” reader should not be thought of as a stage of development in which all words can be processed quickly and easily. Even highly skilled readers may encounter uncommon, low-frequency words such as oenology, epistrophe, anfractuous, faience, casuistically, and contralesional – words that they cannot recognize automatically but that require some reliance on decoding strategies. Skilled readers usually have several options available for word recognition. (Fluency, p. 8)

It is noted that much of the research in the area of repeated reading and fluency

originates from elementary students or students with reading disabilities in the secondary level. Research conducted by Francis, Fletcher, Catts, and Tomblin (2004) and Paris, Carpenter, Paris, and Hamilton (2004) also indicated that the relationship between ORF and comprehension tend to be more developmental. Review of the literature indicates that while there is benefit to instructionally focusing on reading fluency, utilizing strategies such as repeated reading may provide a greater long-term effect. Utilization of researched based comprehension strategies such as questioning, visualization, and QAR may be of greater benefit to older students (Edmonds et al., 2009). It is suggested that by teaching students to utilize research-validated comprehension strategies, they will have the skills to build on decoding issues and learn how to make connections which also relate back to Stanovich's (1980) Interactive Compensatory Model of Reading. This model stated that reading is more than a top-down/bottom-up model; reading is a series of events which draws from a variety of resources when reading. Readers who have the ability to use previous association and knowledge of word meaning and utilize comprehension strategies may have a stronger chance of increasing their overall understanding and reading ability. It is noted that even though Stanovich (1980) may advocate that readers utilize a variety of strategies, speed and accuracy still remain important components regardless of which automaticity theory you align with. It is noted that analysis indicates that students who received instruction in comprehension strategies showed gain regardless if they had a reading disability or were a nondisabled reader. This is relevant to the current research as students in the control group received instruction that focused on comprehension skills during the implementation versus the experimental who spent the majority of the time working on the repeated reading intervention. Response from one of the teachers who implemented the study indicated

that one of the reasons that the experimental group may not have shown as much growth was that much of their time was taken working through the process with less time available to read and focus on comprehension strategies. This, in conjunction with the lack of consistency, may have limited the ability of the repeated reading intervention to have a more substantial gain.

Repeated Reading and the Impact on Prosody

Prosody is often overlooked in defining a definition for ORF. Prosody specifically considers the expression, volume, pitch, and intonation a reader uses when reading. Rasinski (2012) stated that fluency instruction focusing only on speed and accuracy diminishes comprehension for students. The utilization of prosody was designed to help focus on more than accuracy and speed but to help students to also consider appropriate elements of prosodic reading. This study utilized the Zutell and Rasinski (1991) Multidimensional Fluency Scale to provide feedback each week. Students would have a partner rate them on the reading prior to practicing the passage for the week. This partner would then share the feedback by sharing their score on the rubric for each one of the subcategories. This process was repeated at the conclusion of the week's repeated reading passage. The researcher hypothesized that the repeated intervention, in conjunction with the feedback from the rubric, would have significantly impacted the overall prosody rating on the posttest. The ANOVA indicated that there were no statistically significant differences between the control and experimental groups.

The mean score for the control on the pretest was 9.9 and the experimental group was 11.0. Once again, the experimental group started with a higher mean score. The higher mean score could have negatively affected the growth since the experimental group did not have as far to go as the control. The posttest mean for the control group

was 11.9 and 12.2 for the experimental. The experimental group had a slightly smaller gain than the control at 1.2 versus 2.0 for the control. The continued pattern of significant growth for both the control and experimental groups continued for prosody as well. Further analysis using the ANCOVA specifically looked at groups by grade level. There were no statistically significant differences noted between the grade levels.

While this study did not support the generalized theory of prosody as illustrated in several cited articles, the literature does support the importance of focusing on its implementation in classrooms including those in secondary schools. Rasinski, Rikli, and Johnston (2009) specifically researched the effects of fluency and prosody for Grades 3, 5, and 7. In this study, Rasinski et al. (2009) noted that the results indicated students may hit a ceiling as they increase in grade level with the least amount of change occurring between fifth and seventh grade, measuring rate and comprehension. Rasinski et al. (2009) stated that while there was a limit on growth, the study indicated that prosody is a valid indicator of fluency.

Growth may have been limited due to students providing feedback in the area of prosody. With young readers who are challenged by fluency issues, the reader may not be aware of the appropriate use of tone, inflection, pause, and emotions in reading. This limitation then would skew the feedback provided by the student in a peer review even with the assistance of a rubric based on their opinion and interpretations of the partner's reading. Kuhn et al. (2010) stated this by illustrating the following idea:

For example, happiness is characterized by fast speech rate, high, rising pitch and variability, and fast voice onsets; and sadness nearly the opposite. Uncertainty is signaled by a sustained rise in pitch (Hirschberg, 2002). However, during the period where children are developing fluency, their concomitant understanding of

emotional prosody is still not fully adult like (Fujiki, Spackman, Brinton, & Illig, 2008; Wells & Peppe, 2003), so we should not expect them to convey these attitudes fully in their readings. (p. 235)

The student's lack of knowledge in relation to how prosody works and its effect on understanding may account for repeated reading not having a significant impact on the student's overall prosody. Students may need a more focused intervention that works on learning how the elements of prosody relate to the student's reading which is not bound by reading a passage in a timed manner. A separate situation allowing students to focus on prosody outside of accuracy and speed may result in prosody scores being affected in a positive manner.

Summary of Major Findings

The results of the study mirror the mixed results that often occur with older readers and other studies using repeated reading as an intervention. In each of the research questions, the data analysis indicated that the intervention did not have a statistically significant impact between the experimental group participating in repeated reading and students who read a novel. While the study did not correlate with many of the studies, it is important to note that there are many factors that could have led to the outcomes described in the data analysis.

When considering the conclusions of the data, there are several issues to consider. One caveat was the analysis performed comparing grade levels and the increase for sixth-grade student comprehension versus seventh-grade student comprehension. This may indicate that the treatment may have a small chance to affect students. Seventh-grade students in the study received repeated reading instruction during the previous academic year (sixth grade) as part of their daily reading instruction. This prior exposure to the

treatment may have limited its overall effectiveness for the seventh grade as students may have made limited gains due to the treatment. Since seventh-grade students had previous exposure to the repeated reading intervention, there could be a question as to student engagement in the process compared to sixth grade who received the repeated reading intervention. Power law could also have a hand in the reduction in sensitivity as students may have shown growth the previous year coupled with the fact that they would show small growth to begin with.

There is also the possibility of text exposure accounting for gains for both groups. As noted in the literature, studies have indicated that this increase in reading may attribute to gains rather than interventions such as repeated reading. Students in middle school begin to see an increase in the exposure to reading requirements during the school day. Students may receive a greater amount of text exposure during the day that is often scaffold through teacher modeling and support with difficult vocabulary. Wexler, Vaughn, Roberts, and Denton (2010) stated that an alternative to fluency intervention is increasing the amount of wide reading that occurs. With this increase in exposure, students may see an increase in comprehension and fluency with text especially with feedback. This is illustrated in a study conducted by O'Connor, White, and Swanson (2007) in which they compared repeated reading to wide reading in a study by grouping students into groups using repeated reading, continuous reading, and control. The authors of the study indicated that all four groups showed improvement over the course of the 14 weeks. There were no statistically significant differences between the groups who practiced repeated reading or continuous reading in regards to reading rate (Khun & Stahl, 2003).

With the research project beginning at the beginning of the school year, student

pretest scores were indicative of their reading skills at the beginning of an academic school year. The change of the daily schedule from a four-block day to a six-period day in recent years was designed to ensure that students received a designated instructional period for content such as science and social studies. Since students were exposed to more literature and vocabulary on a consistent basis, this could assist students in showing growth in both the experimental and control groups. In their book, Fielding, Kerr, and Rosier (2007) introduced Kennewick School district. This district successfully increased a majority of their schools' proficiency on reading and math assessments. As part of their research, they prescribed to the theory that students who are behind must not only make a year's growth from direct instruction but also have additional time to address their gap which is research-based. The concept was that students who are 2 years behind will remain 2 years behind unless extra instruction is in place to assist with closing the instructional gap. While a student may make "growth" during the school year, unless research validated instruction is introduced, the student will continue to make the year's growth with a 2-year gap still prevalent.

It is suggested that with this intervention occurring outside the direct instruction time but in conjunction to the instructional period each day, the extra time could have assisted in the growth for both groups. Therefore, measuring the effectiveness of the repeated reading may have been inhibited as students were gaining instruction for 120 minutes each day in language arts for both the experimental and control groups. The students in both groups had exposure to research-based instruction that focused on comprehension strategies such as visualization, fix-it strategies, and metacognition. The use of the reading strategies combined with the increased exposure to daily reading and increased use of vocabulary in science and social studies may have led to students in both

groups receiving instruction that assisted with their growth. This increase in exposure to text is also supported by other researchers. Allington (1977) stated that we may have confused the idea of increasing fluency through instruction rather than reading. Allington stated that while we are working hard to address issues of fluency, much of our time is directed towards direct learning rather than practicing the skill of reading. He suggested that in our desire to assist students through remedial instruction, we severely limit the exposure to reading and vocabulary. We instead replace it with worksheets, flash cards, and other types of instruction that prevent students from practicing reading.

It should seem clear to anyone who examines the issue that reading is not responding to flashcards, nor is it filling in blanks, marking vowel values, or responding to graphemes presented in isolation. Reading ability is not necessarily facilitated by nor does it necessarily require the ability to perform the above acts. To develop the ability to read fluently requires the opportunity to read – a simple rule of thumb. If, in a typical week of reading instruction, students only encounter 150 to 500 words in context one has to ask: How they ever gonna get good? (Allington, 1977, p. 2)

Teachers indicated that the time of day significantly impacted the student participation in the treatment. Students frequently checked out early for a variety of appointments or daily student attendance prevented students from fully participating in the study. In questions posed to teachers following the implementation of the study, three of four teachers all suggested that the time of day had a negative impact on the results of the study. This inconsistent participation may have prevented students from fully engaging in the repeated reading intervention. The sixth-grade teacher of the experimental group specifically noted that some weeks they were only able to implement

the study 2 of 4 days due to schedule changes and school calendar. The structure of the school week and calendar provided a challenge for implementation. Due to an intramural period each week, the intervention was only able to meet 4 of 5 days. There were also several occasions where the intervention and control group would not meet due to days out of school for workdays, breaks, assemblies, and a field trip. This lack of consistency may have contributed to the lack of statistical difference as the research needed a more consistent pattern of implementation.

While both groups showed growth, students needed to participate each day in order to practice the passage and monitor changes each week. One of the experimental group teachers indicated that early in the morning would have allowed students to have a more consistent implementation of the study which could have changed the outcome of the data. While the design of the research was to expose the students to the treatment and control for 7 weeks for 4 days a week, this was not the reality of what was implemented. The sixth-grade teacher of the experimental group also indicated that students were involved in the process of repeated reading so they had considerably less time to address a novel. This relates back to the concept shared by Allington (1977) regarding exposure to reading and that a student's limited exposure to text due to spending so much time on an intervention could have had a negative impact on the study's outcome.

The sample size for the study may have negatively impacted the outcome. A larger population would have provided a larger number of data points to consider. While this study did have more participants than other studies reviewed, there were challenges in securing permission from parents to utilize their child's data in the final results. As with any study, the larger the sample size, the more reliable the results are (Suresh & Chandrashekara, 2012). While the data results indicated that there were no significant

statistical differences for the control and experimental groups, it is noted that this is not a conclusive statement to the effectiveness of the treatment. The results only mirror the fact that it did not show a strong correlation for this research.

An increase in the number of teachers administering the control and experimental groups would have addressed the possibility of teacher effect on the results. While all teachers had the appropriate credentials and the experimental teachers had all the appropriate training, a larger number of teachers would have provided a more reliable implementation. When the research was proposed, the researcher had four teachers with similar years of experience and teaching in the field. During the transition to a new school year, the seventh-grade control teacher was changed. This educator was a beginning teacher in her first year of teaching language arts. This is reflected in the ANOVA by noting that the seventh-grade control had a statistically significant lower rate of growth compared to the other three groups compared by grade and group.

Table 22

Demographics of Participating Teachers

Teacher Description	Years of Teaching	Highest Degree Obtained
Sixth-Grade Control	15 Years	Bachelor's in Middle Grades with National Board
Sixth-Grade Experimental	3 Years	Master's of Reading
Seventh-Grade Control	2 Years	Bachelor's in Middle Grades
Seventh-Grade Experimental	5 Years	Master's of Elementary Ed

Context of the Findings

The results continue to support the mixed results that are associated with upper-

grade students and repeated reading. Reading fluency is an important skill for secondary students because of the large quantities of text they must read for school assignments (Bryant & Rivera, 1997). While growth occurred for both groups, it is reasoned that the experimental group should have shown a stronger gain due to the implementation of the repeated reading intervention.

Review of the literature indicates that much of the relevant research is designed for students in the elementary school or identified as disabled readers. Meyer and Felton (1999) stated,

Many researchers have convincingly shown that for a wide variety of readers, Repeated Reading improves reading speed as measured by the number of words read per minute. This is true for normal third grade readers (Rasinski 1990; O'Shea, Sindelar, and O'Shea 1985; Faulkner and Levy 1994), for second grade readers with normal decoding skills but slow reading rate (Dowhower 1987), and for older elementary school students who are poor readers (Herman 1985; Rashotte and Torgesen 1985; Stoddard, et al. 1993; Faulkner and Levy 1994; Flynn, Rahbar, and Deering 1998). Note that most studies of Repeated Reading focus on elementary school students, which limits our ability to generalize the results to older students. (p. 290)

While there is a limited amount of research on upper-grade readers in the area of fluency, multiple findings have supported the connection between fluency and comprehension such as Fuchs et al. (2001), Jenkins, Fuchs, Espin, van den Broek, and Deno (2000), and Kuhn and Stall (2003). Paige (2012) concluded that there are two points to consider regarding fluency instruction and why it should be addressed in upper grades. First, fluency levels must be inadequate or else the middle and secondary

classrooms would not have preponderance of dysfluent readers as illustrated by research in the field. Secondly, the common cause of reading issues in upper grades is not because students have a learning disability as they have the foundational skills to read. Paige (2012) continued by stating students have not had the sufficient time to read with the increased challenge of text that upper grades often require; therefore, they need more time to practice these skills. Paige and Magpuri-Lavell (2014) continued their support of this idea by stating,

As students' progress through the middle and secondary grades they encounter a wide variety of text genres and topics across content areas. While many students transition from the elementary grades as fluent readers, many others do not. For even fluent readers, some of the texts they will encounter require the learning of new syntax, vocabulary, morphemes, and ideas written with multiple meanings. For those students entering middle school who are less than fluent readers, the challenge to read such texts is immense. As teachers, we can help all students gain access to the texts we teach and expect them to be able to absorb, by implementing the fluency strategies that we have described above into our teaching. The current trend across classrooms in the U.S., as well as other many countries, is to lead students in higher order and strategic thinking about the content we teach. Unfortunately, it is very difficult for a reader to critically consider a text which they struggle to read. Because too much of the student's attention is devoted to just reading the words, little is left over to consider what the text means. Thus, fluent reading is critical because it allows the reader to pivot their attention from decoding processes to understanding. Incorporating the strategies suggested above in the middle and secondary grades will help students

better learn the content which we work so hard to teach. (pp. 90-91)

While the results of this study did not significantly support the generalized theory that repeated reading would increase students WCRPM, Speed and Accuracy, Comprehension and Prosody, the fact remains that focusing on reading did show growth in both groups of students as well as research in the field that supports the use of repeated reading.

Recommendations

This study has value to educators as we consider how to assist students. The literature supports the focus of repeated reading as an intervention for students identified as at-risk as well as any reader who is deemed below grade level. While this particular study did not find a significant correlation, research in the field has. Therefore, it is suggested that middle schools continue to utilize multi-tiered systems of support that utilize CBMs to determine student reading ability. Use of these CBMs should assist teachers in identifying students with low fluency and then assist them in implementing research-based strategies such as repeated reading, reading aloud, whole class choral reading, and other age-appropriate fluency interventions. It is important that teachers monitor student progress and provide feedback to the students so that there is not only accountability but a visual means for students to see their progress.

Teachers should continue to receive the appropriate professional development regarding how to use these measurements and then the appropriate research-evidenced interventions that would assist students with closing their fluency gap. Continued professional development on how to work with students who are identified as below grade level in fluency should be implemented and time designated during the school day that is protected so that the intervention can be implemented on a consistent basis. A

major concern for middle grades teachers is professional development that is devoted to how to teach reading. Time and again, middle school teachers discuss with administrators their frustration with students who cannot read and their lack of knowledge of how to help.

Unfortunately, several recent studies and surveys of teacher knowledge about reading development and difficulties indicate that many teachers are under prepared to teach reading. Most teachers receive little formal instruction in reading development and disorders during either undergraduate and/or graduate studies, with the average teacher completing only two reading courses. Surveys of teachers taking these courses indicate consistently that very few of them have ever observed professors demonstrating instructional reading methods with children; teachers also report that their course work is largely unrelated to actual teaching practices, that the theories they learn are rarely linked to the actual instruction of children, and that the supervision of student teaching and practicum experiences is frequently lacking in consistency and depth (Lyon, 1997).

At a university level and a district level, secondary teachers must be given the skill sets that allow them to understand the complex process of how learning to read occurs and ways to assist students who may need instruction beyond the early developmental years in elementary school. This may greatly reduce the ever-increasing number of students who are identified as having a reading disability and create stronger classrooms across our nation.

Replication of this study with a different time of implementation in the instructional day and the use of a different intervention approach for prosody may also help to show that repeated reading can be effective and assist students in not only

increasing speed and accuracy but also comprehension which is an important element in secondary language arts classrooms.

Suggestions for Further Research

The limitations listed regarding sample size, teacher participation, and time of day affect the suggestions for further research. It would be beneficial to increase the number of students who participated in the research. The benefits to all students would be a point of research so the research may be extended to all students in a grade level to measure the effectiveness not just for at-risk readers but for those who are considered proficient and advanced. This would provide information regarding diminishing returns on the implementation for students above grade level as well.

Utilization of a different pre/posttest may give a better measurement of the intervention's effect. Nationally normed tests such as the Gates McGinties Reading Assessment and Test of ORF would provide a more reliable measurement of change with subcategories such as vocabulary, word identification, and contextual meaning. While the tests used in this research are valid tools, these subcategories may assist in identifying specific areas that are affecting the ORF rate.

As one of the limitations, it was noted that attendance for students in this research project was a major concern. An in-depth study of the students deemed as at-risk readers should be conducted looking at the correlation of attendance issues and student fluency/reading abilities. The research would specifically look to see if a pattern of high absenteeism has occurred, at what point in the educational history did it begin (if evident), and its impact on the student's academic performance. With elementary schools now utilizing Reading 3-D, there is a historical account of student reading abilities that can be traced back to the implementation of this CBM program.

Summary and Conclusion

While this research project did not explicitly support the impact of repeated reading, there is substantial evidence in the literature and other research projects that indicate there is a positive correlation. This study hypothesized that the use of the repeated reading intervention would have an impact on students assigned to the experimental group. There is evidence of growth but it is not exclusive to the students who participated in the experimental group as a result of repeated reading.

While this study does not have the same outcome, it is believed that repeated reading does have a significant value for not only elementary students but also adolescent readers who are struggling to access text at an appropriate reading rate and with the appropriate prosody. While reading fluency is not at the forefront of the classroom in middle grades, it is an important instructional element to ensure that our students are well prepared for the challenging tasks of the workplace and postsecondary institutions. As we continue to investigate the impact that reading fluency has on upper-grade students, the researcher believes we will see more and more middle-grade classrooms utilize research-evidenced instructional methods such as repeated reading in upper grade classrooms on a more consistent basis.

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Appendix A

Teacher Validation Results for Multi-Dimensional Fluency Rubric

6th Grade Experimental Teacher

	Reader 1	Reader 2	Reader 3	Reader 4	Reader 6	Reader 6
Expression/Volume	3	3	3	3	3	3
Phrasing	3	3	2	3	4	2
Smoothness	3	2	2	3	3	2
Pace	3	2	2	1	3	2
Total	12	10	9	10	13	9

6th Grade Control Teacher

	Reader 1	Reader 2	Reader 3	Reader 4	Reader 6	Reader 6
Expression/Volume	2	3	2	4	2	3
Phrasing	2	2	1	4	3	1
Smoothness	1	2	2	4	3	2
Pace	2	2	1	4	3	1
Total	7	9	6	16	11	9

7th Grade Experimental Teacher

	Reader 1	Reader 2	Reader 3	Reader 4	Reader 6	Reader 6
Expression/Volume	3	4	3	4	3	3
Phrasing	3	3	2	3	3	2
Smoothness	3	3	1	4	3	1
Pace	1	3	2	2	3	2
Total	10	13	8	13	12	8

7th Grade Control Teacher

	Reader 1	Reader 2	Reader 3	Reader 4	Reader 6	Reader 6
Expression/Volume	2	3	3	4	4	3
Phrasing	3	3	2	4	3	3
Smoothness	2	4	1	4	3	2
Pace	2	4	2	3	3	2
Total	9	14	8	15	13	10

Appendix B

The Multidimensional Fluency Scale: Student Edition PEER ASSESSMENT

Multi-Dimensional Fluency Rubric- Student Friendly
Zutell and Rasinski (1991)

	1	2	3	4	Score
Expression and Volume	<p>Reads in a quiet voice as if to get words out. The reading does not sound natural like talking to a friend.</p> <p>Too Quiet, No Expression</p>	<p>Reads in a quiet voice. The reading sounds natural in part of the text, but the reader does not always sound like they are talking to a friend.</p> <p>Less Quiet Some Expression</p>	<p>Reads with volume and expression. However, sometimes the reader slips into expressionless reading and does not sound like they are talking to a friend.</p> <p>Volume Generally Good Adequate Expression</p>	<p>Reads with varied volume and expression. The reader sounds like they are talking to a friend with their voice matching the interpretation of the passage.</p> <p>Just Right Volume Very Expressive</p>	
Phrasing	<p>Reads word-by-word in a monotone voice.</p> <p>Word-by-Word</p>	<p>Reads in two or three word phrases, not adhering to punctuation, stress and intonation.</p> <p>2-3 Word Phrases</p>	<p>Reads with a mixture of run-ons, mid sentence pauses for breath, and some choppiness. There is reasonable stress and intonation.</p> <p>Generally Good Phrasing</p>	<p>Reads with good phrasing; adhering to punctuation, stress and intonation.</p> <p>Excellent Phrasing</p>	
Smoothness	<p>Frequently hesitates while reading, sounds out words, and repeats words or phrases. The reader makes multiple attempts to read the same passage.</p> <p>Sounds Very Choppy</p>	<p>Reads with extended pauses or hesitations. The reader has several "rough spots."</p> <p>Choppy</p>	<p>Reads with occasional breaks in rhythm. The reader has difficulty with specific words and/or sentence structures.</p> <p>Generally Smooth</p>	<p>Reads smoothly with some breaks, but self-corrects with difficult words and/ or sentence structures.</p> <p>Very Smooth</p>	
Pace	<p>Reads slowly and laboriously.</p> <p>Very Slow (or Very Fast)</p>	<p>Reads moderately slowly.</p> <p>Slower or Faster than Normal</p>	<p>Reads fast and slow throughout reading.</p> <p>Generally Good Pacing</p>	<p>Reads at a conversational pace throughout the reading.</p> <p>Just Right Pacing</p>	

Appendix C

Permission to Complete Study in District

Re: Permission to complete study

Mr. Stocks

I grant permission for you to conduct your research in the [REDACTED] related to your dissertation. I look forward to reading and learning from your research. Please let me know if I may be of any assistance in communicating with other leaders in our district to facilitate the gathering of the prudent data related to your research.

Best of luck,

On Wed, Apr 23, 2014 at 10:02 AM, Dion Stocks <[stocksd@\[REDACTED\]](mailto:stocksd@[REDACTED])> wrote:
[REDACTED],

I am writing today to request formal permission to complete my dissertation study. I will be utilizing student's data as part of my study to measure the effectiveness of repeated reading on at risk middle school students. I will specifically measure the change in reading fluency which encompasses words correct per minute, comprehension and prosody.

Thank you for your support.

Respectfully,

C. Dion Stocks

C. Dion Stocks

Principal

[REDACTED] Middle School

Home of the [REDACTED]
[REDACTED]
[REDACTED]

Appendix D

Consent to Participate in Study

Consent Form to Participate in Doctoral Study

To the parent/guardian of _____

You are invited to have your child become a volunteer in a research study being conducted by Dion Stocks, Doctoral student. I am writing to seek your consent for your child to participate in a doctoral study entitled "*The Impact of Repeated Reading as an Intervention for Middle Grades Sixth and Seventh Grade Students on Reading Fluency.*"

Description of the Study:

The purpose of this study is to determine the overall effectiveness of using a specific reading strategy for students who are currently identified as a struggling reader. The intervention that will be studied is Repeated Reading. In this intervention, students practice a series of reading passages each day and graph changes (if any) in their speed, how accurate they are in reading, and how much emotion/expression that they use. This intervention has shown positive growth in the area of fluency (the speed, accuracy, and expressiveness of reading) as well as helping students with their overall comprehension. Students will also participate in reading a novel that all sixth or seventh grade students will read during a special instructional time called Literacy Block.

Since we are seeking to see if the intervention is effective, students may also be assigned to a group that reads the novel which all other sixth or seventh grade students are reading. Students in both groups will take a pretest and then a posttest after seven weeks and we will compare the results. This will allow us to determine if there was a change with the group who participated in the Repeated Reading Intervention.

At the conclusion of the study, the students who did not participate in the Repeated Reading intervention will begin a research-based program that includes repeated reading and fluency instruction. Therefore, all students will receive the repeated reading intervention though it will not be at the same time.

We have selected your child to participate in this study because we believe based on their NC EOG scores and their SRI reading level they would benefit from the extra instruction and focus in the area of reading fluency. Students will measure the change in their fluency utilizing AIMSWeb© and a Multidimensional Fluency Rubric. These measures will allow us to determine where your child's fluency is at the beginning of the study and how much growth, if any, at the conclusion of the study.

Do I have to participate?

Participation is completely voluntary. This form will allow you to choose if you wish to have your child as a part of this study. We will provide you a copy of this form with your signature for your personal records. As the participants parent, you have the right to withdrawal your child before the study begins or discontinue after the data collection has started.

Will my participation be kept confidential?

All students will be assigned a random number when assigned to the groups. This number will be used when reporting any data in the final dissertation. Student's data will be reported in the dissertation in an anonymous manner.

What will happen to the information which you give?

Data will be reported using the randomly assigned number when publishing the final dissertation. The results of the study will also be shared with the administration and teachers participating in the study. The purpose of sharing this information is to assist the administration in determining if continued use of the intervention is warranted and to also assist in knowing the students current fluency level.

What are the possible disadvantages of taking part?

At this time, there are no foreseeable disadvantages for your child. It is possible that students may experience some distress being in a group that is focusing on fluency due to below grade level reading abilities.

What if there is a problem/question?

If there is a problem, please feel free to contact the researcher Dion Stocks at [stocksd@\[REDACTED\]](mailto:stocksd@[REDACTED]) or 336.[REDACTED]. Should you have any questions, concerns, or wish to withdraw your child's participation at any time you may contact me at any time through means of contact listed above.

Who has reviewed this study?

This study has been reviewed by a committee and the School of Education at Gardner-Webb University. A formal review was conducted by a committee to approve the study and review all protocols including the use, implementation, and reporting of the intervention results.

Please mark your decision below and I understand by signing:

- The purpose and nature of the study has been explained to me in writing
- I understand that anonymity will be ensured in the write-up by using a random number and random assignment to the groups
- I understand that if my child is not assigned to the group receiving the intervention during the study that my child will be offered participation in a research-based intervention that focuses on fluency instruction and word study at the conclusion of the study period.
- I understand that I can withdraw from the study, without repercussions, at any time.

I _____ parent/guardian of _____
give permission for my child to participate in the dissertation study for.

I _____ parent/guardian of _____
do NOT give permission for my child to participate in the dissertation study.