

***Does Repeated Reading Improve Reading Fluency and Comprehension
for Struggling Adolescent Readers?***

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Abstract

This was a 12-week study that explored the effects of repeated peer readings on struggling adolescent readers. It was a quasi-experimental design with one treatment group and one control group. There were two small group English classes that were consistently using the repeated reading strategy (the treatment group) and students in the co-teach English class who were not using the repeated reading strategy (the control group). The students were not randomly assigned. The pre- and posttests given were the AIMSweb (to measure fluency) and Scholastic Reading Inventory (to measure comprehension). This study investigated the effects of repeated peer reading on reading fluency and comprehension. It also explored the relationship between reading fluency and comprehension. In the area of reading fluency, the results showed that one participant in the treatment group increased and five participants from the control group improved. In the area of reading comprehension, six of the treatment group participants increased and six of the control group participants improved. The participants in the treatment group had larger gains in comprehension than did the control group participants. The data indicated an inconsistent relationship between reading fluency and comprehension.

Repeated Readings Improvement on Fluency & Comprehension

Reading fluency is usually developed in second or third grade, but there are many adolescents who struggle with this basic reading skill that was never developed at an earlier age. Many adolescents with learning disabilities struggle to read fluently and comprehend what they are reading. "Struggling adolescent readers read as few as 10,000 words per year, whereas average readers may read 10 times or even 100 to 500 times this number of words" (Dudley, 2005, p. 16). It is the responsibility of the high school intervention specialist who works with these students to implement research proven strategies that will aid in the improvement of basic reading skills to improve both reading fluency and comprehension. Repeated reading is the specific strategy that is being investigated in this study.

Related Literature

Reading Fluency

Reading fluency is a key element in the reading process. “Reading fluency is recognized as one of the five essential components of reading development” (Dudley, 2005, p. 17). Samuels, Ediger, and Fautsch-Patridge (2005) provide five stages of reading as they relate to expression, attention, and the comprehension process and how reading fluency plays an integral part in each of the five stages. **Stage zero** is the prereading stage where students can retell stories, recognize letters in the alphabet, and can write their names. **Stage one** is the decoding level where simple text with predictable wording can be “sounded out,” and it is noted that word recognition is the main focus of this stage. **Stage two** is the confirmation level where the short texts are read with increased and improved fluency. In this stage, word recognition is becoming more automatic. **Stage three** is the reading to learn stage where readers learn information (ideas/concepts) from words on the page. In this stage reading is still becoming more automatic, but the readers comprehend what they are reading. **Stage four** is called multiple view points. The readers can read difficult material and provide perspectives and attitudes based on the text. The **final stage** is construction where students are automatic at decoding and are able to comprehend simultaneously (Samuels et al., 2005). In each of the stages listed above, the students’ reading fluency is essential to progress to the next stage.

For now, reading fluency is defined by educational theorists. Samuels et al. (2005) defines reading fluency as, “The ability to decode and comprehend at the same time. Other components of fluency, such as accuracy, speed, and oral reading expression are simply indicators” (p. 2). In the definition stated above these authors include the component of comprehension as part of the reading fluency definition that the following educational theorists do not include. It is defined by Applegate, Applegate, and Modla (2009) as, “An indicator of the speed, accuracy, and prosody of oral reading” (p. 513). Dudley (2005) states that, “Oral reading fluency is defined as the mastery of these three observable behaviors: automatic processing or decoding of words, accuracy in decoding, and prosody” (p. 17). Therefore, if a student can automatically decode words with accuracy and prosody, then they are considered fluent readers by the definition stated by Dudley (2005). Rasinski, Rikli, and Johnston (2009) break down reading fluency into two components: automaticity and prosody.

Automaticity. Automaticity is one of the main elements of reading fluency. It is defined as “fast, accurate, and effortless word identification at the single word level” (Hook & Jones, 2002, p. 10). Kuhn, Schwanenflugel, and Meisinger (2010) state that the four characteristics of automaticity are, “speed, effortlessness, autonomy, and lack of conscious awareness” (p. 231). Speed is the first property of automaticity, but it is related to and emerges with accuracy. As the students read more accurately, they become faster readers. The second characteristic is effortlessness, which means that the reader has a sense of ease and is able to complete two tasks at the same time since the first one is easy. When readers do not have trouble recognizing words, reading is effortless for them. The next attribute is autonomy, which is basically when readers recognize words

as they see them with little to no choice but to read them. The last component that makes up automaticity is conscious awareness. Readers that have automaticity lack a conscious awareness in word recognition (Kuhn et al., 2010). The idea that automaticity is a reading skill that is vital to reading fluency has been evident since the 1970s.

The theory of automaticity came from LaBerge and Samuels in 1974. This theory states that readers who have not achieved automaticity in word recognition/fluency must apply a great amount of their finite cognitive energies to decode the words as they are reading. The students' cognitive energy which is applied to the low-level decoding task of reading is energy taken from the task of comprehending the text. (Rasinski et al., 2005). Since energy is taken away from comprehending the text, comprehension is negatively affected by the lack of automaticity a student may have (Rasinski et al., 2009). In essence, this theory states that the more a student can automatically decode words, the more focus they can have on comprehending what they are reading instead of focusing on the decoding aspect of reading.

In order to become an automatic reader there are underlying skills that must be achieved. A strong phonemic awareness base is the beginning of the process and with that comes the phonic word attack strategies (Hook & Jones, 2002). Then orthographic patterns begin to surface. Hook and Jones (2002) state that, "Automatic reading involves the development of strong orthographic representations" (p. 2). If students struggle with these underlying skills, they will struggle with automaticity when reading.

Prosody. The other component that makes up reading fluency is prosody. Prosody is when one reads with expression. When reading with prosody, it is like the reader uses spoken language when they are reading and it is the melody component when reading (Rasinski et al., 2009). Samuels et al. (2005) believes, "oral reading expression serves as an indicator of what the reader understands" (p. 2). Samuels et al. (2005) includes the following examples as part of oral reading expression: pitch changes in the reader's voice, pauses in punctuation, emphasis on words or ideas as the reader is reading, and pauses as the reader approaches certain punctuation.

Kuhn et al. (2010) demonstrates similar ideas to Samuels et al. (2005) but explains the features of prosody which are the following: fundamental frequency, duration, stress, and pausing. Fundamental frequency is another name for pitch. A reader's pitch needs to be taken into consideration when he is reading along with duration. When the reader is reading, the duration is the time amount in how the reader reads stressed and unstressed words. When a reader puts more emphasis on one word in a sentence than other words, that word is stressed. The last prosody feature given by Kuhn et al. (2010) is pausing. "Pausing is noted by a spectrographic silence in oral reading beyond that invoked by some consonant combinations" Kuhn et al., 2010, p. 235).

There are two ways that teachers can measure reading prosody among their students – by using rating scales and spectrographic measures (Kuhn et al., 2010). The two most common rating scales are the NAEP Oral Reading Fluency Scale and the Multidimensional Fluency Scale (Kuhn et al., 2010). The NAEP Oral Reading Fluency

Scale is based on a 4-point scale which differentiates between reading word by word and reading that is made into meaningful sentences. The Multidimensional Fluency Scale has four separate 4-point subscales which differentiate between phrasing and expression, smoothness and accuracy, and pacing.

Fluency and Comprehension/Achievement Studies

There are three studies and data from the state of California that examined the relationship between reading fluency and comprehension that affect achievement on standardized tests. Two prominent researchers, Hook and Jones (2002) and Rasinski et al. (2005), tend to have the same beliefs about reading fluency and comprehension. Hook and Jones (2002) state, “The speed and accuracy at which single words are identified is the best predictor of comprehension” (p. 2). This statement by Hook and Jones (2002) links reading fluency and comprehension by basically indicating that reading fluency influences the outcome of comprehension. Rasinski et al. (2005) performed a study on 303 high school students who after being assessed with a one minute reading probe had not achieved a level of normal or average fluency for their grade level. After computing the data, the results indicated that there was a statistically significant and moderately strong relationship between reading fluency and comprehension. “This means that about 28% of the variation in student achievement on the high school graduation test could be accounted for by variation in students’ reading fluency” (Rasinski et al., 2005, p. 25). There was a correlation between the fluency scores and students’ state scores on the state high school graduation test as Rasinski et al. reported (2005), “The results of our study lead us to conclude that improvements in fluency could account for significant and substantial gains in students’ reading comprehension” (p. 25).

A study performed by Michael Albrecht (2009) examined the relationship between reading fluency and comprehension with eight elementary school students in third and fourth grade. The materials used in this study were the Reread-Adapt and Answer-Comprehend passage sets that included eight comprehension questions with each passage. The three variables being tested were the oral reading fluency (measured by correct words per minute), maze performance (every seventh word removed), and questioning (literal and inferential). The treatment session was five to seven consecutive days. The following steps were included in the treatment session: (1) teacher cued the student with a statement, (2) using the cue card the teacher prompted the student to read aloud, (3) the student reread the passage until the desired correct words per minute were reached, (4) teacher gave corrective feedback on word errors, (5) student answered cue card questions orally, and (6) the teacher adjusted the reading level for the next use. The results showed that there was a linear relationship between fluency and comprehension, there was a fluency range that predicted comprehension levels, and the relationship between fluency and comprehension was distinct (Albrecht, 2009).

In the two studies described above there was a correlation between reading fluency and comprehension, but the result from the state of California’s data and results from Applegate et al. (2009) study contradict the above mentioned studies. The state of California placed heavy emphasis on instruction in fluency in the elementary grades for

the last several years. Now the standardized test data show a sizable decrease in reading comprehension scores across the state as students make the transition into high school (Curtis, 2004). The other contradictory article referenced was authored by Applegate et al. (2009) who performed a study with students having a high level of fluency measured by their rate, accuracy, and prosody. The study tested to see if students with high levels of fluency would also have high levels of reading comprehension. This study also tested to see if a student with high leveled fluency would have high leveled comprehension when assessed through thoughtful response to text. The students in this study were also recognized by their parents and teachers as strong readers. There were 171 students who participated in the study ranging from grades 2 through 10. The Critical Reading Inventory-Two was used to measure comprehension. Each student had to read two narratives, one orally and the other silently. After each passage they had to retell it, answer 10 open-ended questions, 8 text-based comprehension questions, and 12 higher order comprehension questions. The results of the study were that 30% of the students achieved a high level of reading comprehension in both literal and higher order thinking. A higher number, 36%, scored as proficient readers who needed some instruction in comprehension. “The most startling finding, however, was the fact that fully one third of our fluent and ‘strong’ readers struggled mightily with comprehension at their current grade level” (Applegate et al., 2009, p. 518). The results of this study demonstrate that even though students are fluent readers, it doesn’t necessarily mean that they comprehend what they are reading.

Repeated Reading Strategy

When repetition is used during the reading process, both automaticity and prosody improve. Kuhn et al. (2010) states, “Repetition allows for the deepening of traces and the freeing up of attention” (p. 233). If the attention is “freed up,” the readers can then focus more on comprehension. Kuhn et al. (2010) also says, “Repeating readings allow learners to establish prosody, identify appropriate phrasing, and determine meaning” (p. 233).

Repeated reading strategy is one of the most popular techniques used to improve reading fluency. Ediger et al. (2005) states, “Samuels (1979) ‘repeated readings’ technique is based on automaticity theory and the simple principle that “practice makes perfect” (p. 4). Repeated reading is also recognized by Curtis (2004) as a very effective approach to building fluency in older and younger students. They claim that repeated reading can be done by speeded practice in reading letters, syllables, words, and phrases or by reading the same text over and over until the pre-established criteria has been achieved (Curtis, 2004). The following quotes point out how a variety of educational professionals feel about the repeated reading strategy. “Repeated reading activities and non-repetitive wide reading are two methods that have been proven to have positive outcomes for building fluency” (Thomas & Wexler, 2007, p. 24). “Repeated reading is one of the most widely used and researched reading fluency interventions” (Dudley, 2005, p. 20).

The repeated reading method as stated above can be presented in a variety of ways by the classroom teacher. Pruitt and Cooper (2008) recognize the different ways classroom

teachers use the repeated reading technique. The common components among repeated reading models are the requirement that students read and then reread a short text that is meaningful, and that they are able to read it with a specified level of speed and accuracy. An additional component is that the students are orally reading text at their instructional level while being timed for one minute. If the specific requirement is not reached during this time period, the students will read the same text during the next session. When the student meets the criteria, they will then read a new passage (Pruitt & Cooper, 2008).

An important aspect of repeated reading is that it relates to the power law which is stated by Samuels et al. (2005), "Research by O'Shea, Sindelar, and O'Shea (1985) showed that significant improvement occurred after each re-reading, up to the fourth reading and then the size of the gains decreased." Samuels et al. (2005) suggests that, "Because performance is not likely to improve after four re-readings, it is in the student's best interest to move on to another passage" (p. 4). This is an essential limitation that classroom teachers utilizing this method need to be aware of. The power law stated by Kuhn et al. (2010) says, "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 as cited in Kuhn et al, 2010, p. 231).

Is repeated reading effective?

The repeated reading strategy has been around for a considerable amount of time. "Repeated reading, originally designed to supplement any developmental reading program, is based on three main goals: increasing reading rate, transferring increased reading rates to subsequent material; and increasing comprehension with each successive rereading of the text" (Dudley, 2005, p. 20). The controversy on whether or not repeated reading strategy improves reading fluency as well as comprehension is stated by Curtis (2004) that repeated reading is an effective technique on older and younger students, "However, gains in comprehension appear to be less striking and may be confined to improved processing at the sentence level" (Curtis, 2004, p. 127).

Rasinski et al. (2005) contradicts the statements made by Curtis (2004) and believes the following:

Repeated reading, another form of reading practice is one of the most powerful ways to increase reading fluency. Through repeated readings of a particular text, students increase their fluency and comprehension of the passage practiced. What repeated readings also lead to gains in fluency, comprehension and overall reading on other passages not previously encountered. (p. 26)

This statement links the variables of repeated reading with improved levels of reading and comprehension. The idea that repeated reading not only helps in the area of fluency but also comprehension, especially on new readings, is paramount.

Repeated Reading Strategy Studies

There have been five studies and a meta-analysis that contained 18 studies completed to examine the success of the repeated reading technique in the areas of reading fluency and comprehension. One study was performed to test the effectiveness of repeated readings with four secondary students (ninth graders) who were labeled as special education students. They were compared with a group of average ability readers. The intervention was three times a week for 20 minutes a session during a 10-week period of time. The reading passages were taken from the Timed Reading Series. At the end of each reading, there were 10 multiple choice comprehension questions which were both literal and inferential to which the students had to provide answers. The Woodcock Reading Mastery-Revised was used as the pre- and posttest. The results from the data collected demonstrated an improvement in reading fluency in three out of four of the students who had only 10 hours of extra practice. The students' reading speed increased from the baseline data. In the area of comprehension, the results of this study demonstrated that none of the students experienced an increase in the number of comprehension questions they answered correctly from the baseline to the intervention (Valleley & Shriver, 2003).

Roundy (2009) completed a study on 110 seventh graders. He was testing the effect of repeating reading on oral reading fluency, reading speed, reading oriented self-esteem, and the confidences of readers (especially those from diverse backgrounds). The participants were each at different academic levels ranging from honors to intensive students. The study's duration was five weeks and the data collected consisted of student interviews focusing on attitudes toward reading, a student reading survey, teacher observations, reflections on student behavior, documented repeated reading experiences, pre/post tests, fluency charts, observations of group sessions, and transcriptions of audio tapes. Roundy (2009) claims that, "It was evident that the achievements made were both academic and emotional" (p. 56) "At the end of the study, students seemed more motivated and less frustrated about repeated reading, and reading in general" (Roundy, 2009, p. 56). In the area of reading fluency, there were noticeable increases in reading fluency among the participants from the beginning of the study until the end (Roundy, 2009).

Musti-Rao, Hawkins, and Barkley (2009) performed a study on peer mediated repeated readings with 12 fourth grade African American students and six of the chosen students were special education students. The purpose of the study was to determine the effects of peer mediated repeated readings on oral reading fluency. The treatment sessions were three days a week for a total of 30 minutes weekly. The student's correct words per minute were the variable being tested and the DIBELS oral reading fluency was used weekly as the progress monitoring data. "At the end of the study, all of the students showed increases in oral reading rate with repeated reading compared with the silent reading (baseline) condition" (Musti-Rao et al., 2009, p. 20). The results showed that the students were able to meet the weekly goals with repeated reading; however, the oral reading rate did not transfer to the unfamiliar passage given in the beginning of the week.

Nelson, Alber, and Gordy (2004) completed a study with four second graders (three with learning disabilities and one with ADHD) using both word error correction and repeated reading strategy. The treatment occurred six minutes every morning for six weeks and sometimes once in the afternoon depending on the students' schedule. The text used in the study was the *Rigby PM Collection* reading series. The dependent variables in the study were the number of words read correctly in context per minute and the number of errors per minute. The baseline data used for the students was a five minute oral reading assessment with errors recorded by the teacher. The student then repeated the reading for one minute which was recorded. After the six week period the results showed that, "The average number of errors per minute decreased for all students during that condition" (Nelson et al., 2004, p. 192). Also, the results indicated that when repeated reading was added to the word error correction strategy, the average reading rates improved and their word errors decreased (Nelson et al., 2004).

Lo, Cooke, and Starling (2011) completed a study performed on three second grade (at risk) students who participated in a repeated reading program that included isolated word reading practice, unison reading, error correction, performance cueing, and feedback procedures. None of these three students was identified as having a disability. The reading probes used in the study were from Dibels Oral Reading Fluency, and the progress was monitored using this assessment as well. During this study, each student had a 15-20 minute individual session four times a week. Also during each session the teacher worked with the participants in the following areas: initial performance cueing and feedback, preview of difficult passage words, initial timed passage reading, performance feedback and error correction, error word or sight word practice, unison reading, repeated performance cueing and feedback, and timed passage rereading. "Results showed that the repeated reading program combining several research-based components improved fluency on second-grade transfer passages for the three participants" (Lo et al., 2011, p. 133).

A meta-analysis was completed by Therrien (2004) that examined 18 repeated reading articles. Therrien (2004) wanted to find out if repeated reading increased fluency and comprehension, the components that made repeated reading effective, and if students with a cognitive disability would benefit from a repeated reading strategy used in the classroom. The results of this analysis showed that repeated reading improves the reading fluency and comprehension of nondisabled students and students with a learning disability. The analysis by Therrien (2004) states, "All students obtained a moderate mean increase in fluency . . . and a somewhat smaller mean increase in comprehension"(p. 257). Therrien (2004) analyzed 18 studies and the results of the data showed improvement in both areas, but the area of reading comprehension had a smaller increase than the results of the fluency. The results of the important components showed that adult implementation was higher in both areas than when peers implemented the repeated reading program. Cueing the student for speed and comprehension was also another vital component to repeated reading. The data show that the passage should be read three to four times. Corrective feedback and performance criterion were other important components noted in the analysis. The nonessential components to the

repeated reading model were the peer-run interventions and comprehension measures (Therrien, 2004).

The studies listed above were performed on different multi-aged students; however, the results were similar. The student's oral reading rate when using a repeated reading program increased in all studies. The study by Valleley and Shriver (2003) points out that the student's comprehension did not improve with the repeated reading model in place, although the meta-analysis which examined 18 studies on the repeated reading model demonstrated an increase in both reading comprehension and reading fluency.

Research Methodology

Research Questions

This study was conducted to test the effects of repeated reading on struggling adolescent readers and to address the following questions:

1. Is there a significant relationship between repeated peer reading and overall fluency increase for struggling adolescent readers?
2. Is there a significant relationship between repeated peer reading and overall comprehension increase for struggling adolescent readers?
3. Is there a significant relationship between reading fluency and reading comprehension among struggling adolescent readers?

Participants/Sampling

The sample for this study consisted of 12 participants of 9th- and 10th-grade students with learning disabilities. Of these 12 students, six were 9th graders and six were 10th graders. There were three girls (one 10th and two 9th) and nine boys (six 10th graders and three 9th graders). This treatment group was serviced in English in a Resource Room. The cultural background for the treatment group was two African American (one boy and one girl) and 10 Caucasians. The control group consisted of 12 participants who are special education students and labeled as learning disabled. Of the control group participants, six of them were boys and six of them were girls. One of the students was African American (one girl) and 11 of the other students were Caucasian. The control group was all ninth graders who were in a co-teach English class and not receiving the repeated reading method or any other treatment of basic reading skills. All the participants attended the public school which has a low to middle socio-economic status. The participants in this study in both the treatment and control group all read below grade level.

Study Design

This was a quasi experimental design consisting of pretests, posttests, and weekly monitoring of both reading fluency and comprehension. The pretest and posttest for oral reading fluency was the AIMSweb fluency assessment and for reading comprehension the Scholastic Reading Inventory (SRI) was used. The variables being tested in this study were oral reading fluency, which was measured by the number of correct words per minute as the probe was orally read aloud. The other component being tested was

reading comprehension, which was measured by the lexile count produced by the Scholastic Reading Inventory (SRI). Progress monitoring occurred throughout the 12 weeks by reporting the results on individual weekly fluency charts (measured on Mondays and Fridays).

This was a 12-week study that examined the effects of repeating readings on oral reading fluency and reading comprehension. The students were paired by different ability levels. The higher achieving students were paired with the lower achieving students. The students read the same passage four times out of the week, one minute each time to their partner. While one of the students was reading, their partner was following along and verbally correcting any oral mistakes that were made. Each participant was assessed on Mondays and Fridays by that same reading passage for the week. The reading passages changed weekly. The reading probes came from *Daily Warm-ups* (Clark, 2006); the ninth grade treatment groups were reading and answering comprehension questions from fifth grade probes and the 10th grade treatment groups were reading and answering comprehension questions from a sixth grade probe. The levels of the probes did not change throughout the 12 weeks. The daily goals were to read faster than the previous day. The student's progress was reported and charted on Monday and Fridays based upon their one minute oral reading.

Instrumentation

When measuring fluency with the AIMSweb fluency assessment three different probes were given to the student during the one session. The student read each probe for one minute for a total of three minutes per session. The assessor recorded the wpm from each probe and then recorded the middle number (after ordering them from lowest to highest) as the student's average reading fluency. The highest level probe the AIMSweb has is the eighth grade probe. The numbers of words the students should be reading fluently from the eighth grade probe is given from the chart based on their grade level (see Appendix A).

The Scholastic Reading Inventory measured the students' reading comprehension by the number of lexiles they received. This is a computer-based assessment where students answer a variety of questions including vocabulary and reading comprehension questions based on short passages given. The SRI uses a three-phase approach when assessing a student's reading comprehension level; they are the start, step, and stop phases. During the start phase, the test determines where to begin testing the student on the lexile scale. The step phase controls the level of the questions that will be given to the student depending on how the student answered the prior question. The last phase is the stop phase, which means that the test has received enough information about the student to give a lexile number based on the student's reading comprehension level ("Technical Guide; Working," 2007). It takes the average student about 30 minutes to complete the assessment on the computer and the entire assessment is between 15-25 items depending on how the student answers the questions they are given. The student is allowed three skips as they take the test. When the students have completed the assessment, a lexile number will appear on the screen along with being able to view books of the student's

interest which are written at that certain lexile number. The lexile number can then be translated into a grade equivalent (see Appendix B).

The reading probes given were from *Daily Warm-ups* by Clark (2006). The fifth grade level probes were used for the ninth grade students, while the sixth grade probes were used for the 10th graders.

Results

The following are the major research findings as they related to the three research questions.

RQ#1- Is there a significant relationship between repeated peer reading and overall fluency increase for struggling adolescent readers?

When analyzing the data of the treatment group's reading fluency from the weekly fluency charts, there were major increases in reading fluency from Monday (cold read) to the Friday read. The total treatment group's average fluency increased each week when given the cold read (see Graph 1 and Appendix C for raw data).

However, when analyzing the data from AIMSweb pre- and posttest that was given, 17% of the participants' wpm increased, 75% decreased, and there was no change with 8% of the treatment group participants. In contrast, the control group had 42% of the participants' wpm increase and 58% decrease from the pre- and post-AIMSweb assessment that was given (see Graphs 2 and 3 and Appendices D and E for raw data).

RQ#2- Is there a significant relationship between repeated peer reading and overall comprehension increase for struggling adolescent readers?

When analyzing the data with repeated reading and reading comprehension, six of the students' lexile scores increased and one was the exact same. The other five students' lexile score decreased. However, the students who did increase improved by at least 50 lexiles. Graphs 4 and 5 represent the treatment group data for reading comprehension (see Appendix F for raw data).

The reading comprehension levels of the students in the control group had six students increase their reading comprehension level and six of the students did not increase their reading comprehension level. Three of the control group participants increased by less than 50 lexiles. Graphs 6 and 7 represent the control group data for reading comprehension (see Appendix G for raw data).

RQ#3 - Is there a significant relationship between reading fluency and reading comprehension among struggling adolescent readers?

When analyzing the fluency and comprehension data among the treatment group, there was one student who increased in both fluency and comprehension. The other 11

participants' data were inconsistent. When examining the data from the control group, four of the students increased in both areas. The other seven participants' data were inconsistent. Graphs 8 and 9 represent the data for the treatment and control group's fluency and comprehension.

Discussion of Results

Repeated Reading and Fluency

The first research question inquired about the relationship between the variables of repeated peer reading and reading fluency among struggling adolescent readers. The repeated reading method and overall reading fluency in the participants in this study showed weekly improvements in reading fluency as charted on their weekly graphs when given a text on their grade level; however, this improvement in reading fluency transferred to 17% of the participants and there was a 75% decrease from the previous assessment before the treatment was given.

Repeated Reading and Comprehension

The next research question investigated the relationship between repeated peer reading and comprehension among struggling adolescent readers. The repeated reading method and overall reading comprehension improved in half of the treatment participants' reading level by at least 50 lexiles. The overall participants who improved the most in comprehension out of the control group and treatment group were those participants who took part in the repeated reading method in the small group class. The treatment group participants who improved their comprehension had a larger increase in lexile numbers than those students from the control group who increased their comprehension.

Reading Comprehension and Fluency

The final research question explored the relationship between reading comprehension and reading fluency among struggling adolescent readers. The data from this study demonstrated that in the treatment group one participant increased in both comprehension and fluency, while three participants decreased in both areas. The remaining eight participants' data were inconsistent. In the control group, four participants increased in both comprehension and fluency, while five decreased in both areas. The other three participants' data were split between comprehension and fluency.

Implications

The results of this study demonstrated that an intervention specialist who is trying to improve their students reading comprehension can use the repeated reading method with struggling adolescent readers and see an improvement in half the students' reading comprehension but will not see improvement in reading fluency of more difficult texts.

When analyzing the fluency data from the treatment group, it is assumed that 75% of the participants did not transfer the basic skills taught in the prior 12 weeks to the more difficult text as the participants in this study demonstrated. When they were given the more difficult text to read, they struggled with even the basic words that they demonstrated automaticity on during the 12-week period. Many of the studies reviewed in this article demonstrated both improved comprehension and fluency, but the results of this study only demonstrate improved comprehension.

After completing this study, when examining the variables of reading fluency and comprehension, it is important to decide which one is more important for your students to be proficient in. I have come to realize that fluency is not as important as comprehension especially when working with students who have a learning disability in reading since they will get extended time to complete their assignments.

The text used during the repeated reading strategy treatment was at the participant's true reading level. For those interested in utilizing the repeated reading strategy in their classroom, they should try using probes that are several grade levels below the participant's grade level. The results could possibly then have improved fluency as well as comprehension.

I will definitely utilize this method or similar techniques to this in my future teaching but will try it with lower level readings. When the students monitored their own fluency on the chart, they were very intrinsically motivated; however, there were a few students who needed an extrinsic reward. Next time, I will make the goals for the students well known and add extrinsic rewards to maintain the student's motivation with the strategy. The basic reading skills do need to be reinforced extrinsically and intrinsically at the high school level, and it only took two minutes a day to improve struggling reader's comprehension.

Since I have completed this study, my teaching has changed. This study had me and my students constantly monitoring their progress. I was always interested in their progress as were the participants. Currently, I have found myself charting and monitoring progress daily like what was done in the repeated reading method study in order to ensure my techniques in the classroom are working efficiently. I find myself pre- and post-assessing more than ever in order to ensure progress is being made.

Many school officials believe that small groups classes should not exist, but the results of this study prove the opposite. The participants who were part of the treatment group had larger gains in comprehension versus the control group participants who came from the co-teach setting. Many districts are eliminating small group instruction and only have co-teach classes for their special education students. If students are sitting in a co-teach English Class and need to be practicing their basic reading skills, they will not get the practice they need in this setting. It is assumed by the regular education teacher and special education teacher that these skills are already developed and proficient. This study demonstrates that small group classes (Resource Room Classes) do have a place in

the school setting and are very much needed in order to help improve struggling adolescent readers.

Concluding Thoughts

There are other factors that are not taken into account in this study that have been mentioned by other researchers that affect the testing results. One of the major factors is the reading interest of the students especially when dealing with the Scholastic Reading Inventory. It does not take into account the student's interests as they are completing the assessment. When students read texts that they are interested in, their comprehension of the text will be higher. The text selection on the Scholastic Reading Inventory does affect how the students will score.

When giving the AIMSweb reading fluency, it is a timed test. The timing variable of this test produces anxiety which, depending on how the participant deals with anxiety, could possibly determine their success on this assessment. The timed aspect of this assessment produces anxiety which can alter the final results of this assessment for anyone who is about to take it.

When reading texts, automaticity and prosody are basic skills that should have already been developed and/or treated by a method like the repeated reading method. These basic skills need to be instilled in students at the elementary and middle school levels. The elementary and middle schools teachers should be using methods like this one daily to improve their students' basic reading skills. The reading instruction that the students had prior to this study is unknown. The amount of time the students read on their own outside of the classroom is also unknown information that could affect the results of this study.

Another factor that could have affected the results of this study is the time period that the posttests were given. The participants completed the 12-week study, and on the first Monday back after completing Ohio Graduation Tests (and the repeated reading method); they took the Scholastic Reading Inventory. This could have affected the results.

The motivation and maturity of the students in this study need to be taken into account when examining this study. The students who had the best outcomes were the hard workers who gave 100% effort on a daily basis. The students who had lower outcomes were the ones who struggled with staying on task and completing the repeated reading method accurately and efficiently. The majority of the participants in this study are "at risk."

In this study the repeated reading method improved overall comprehension but did not improve fluency of more difficult texts. The students who participated in the small group class and received the repeated reading method intervention did benefit from the daily reading practice and reinforcement of the basic reading skills. The comprehension of half the participants did indeed improve. Researchers in the area of reading fluency and comprehension do suggest that there is a correlation between these two components; however, the data from this study are inconsistent and currently do not prove to agree with the previously mentioned conclusions.

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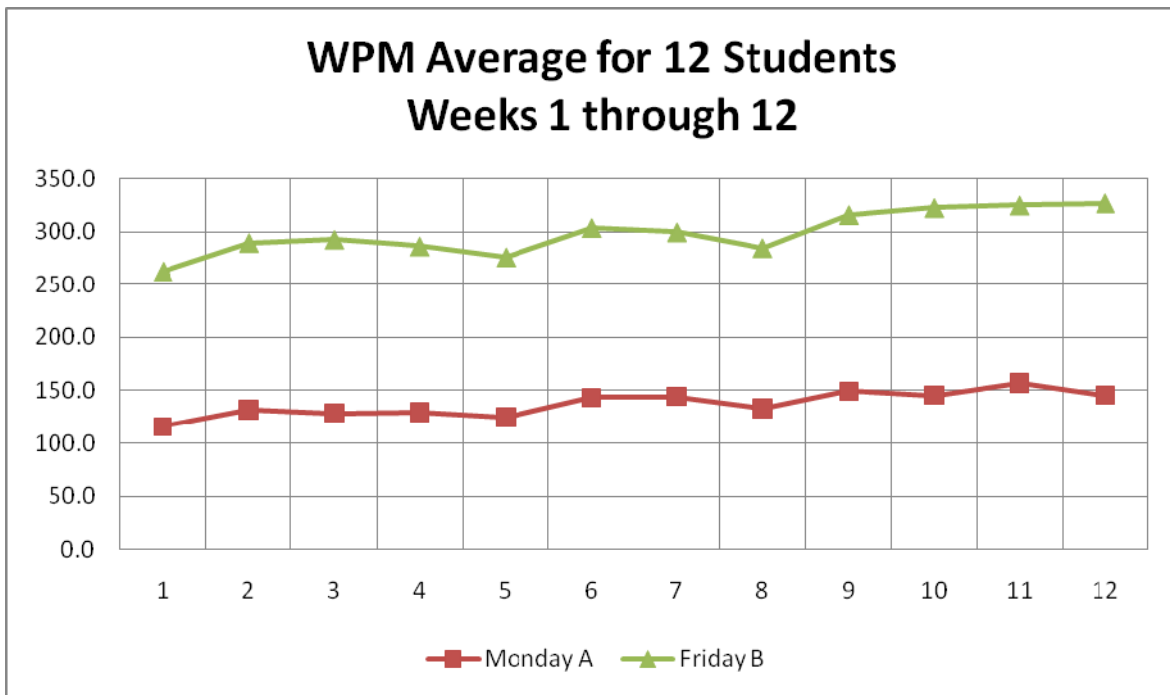
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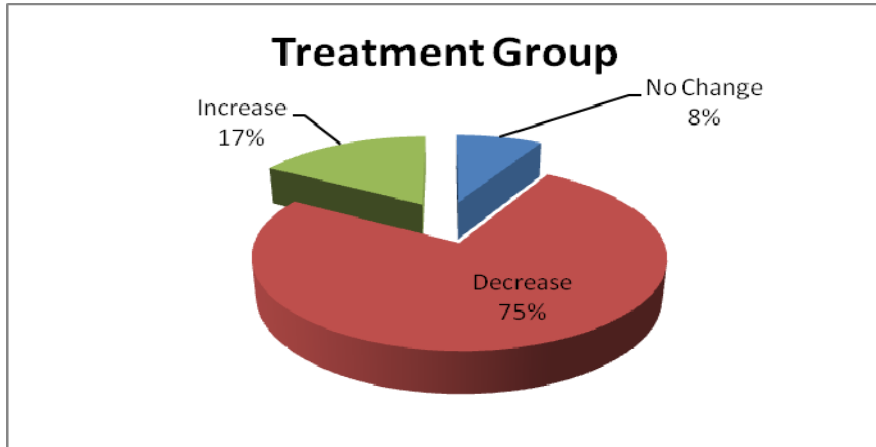
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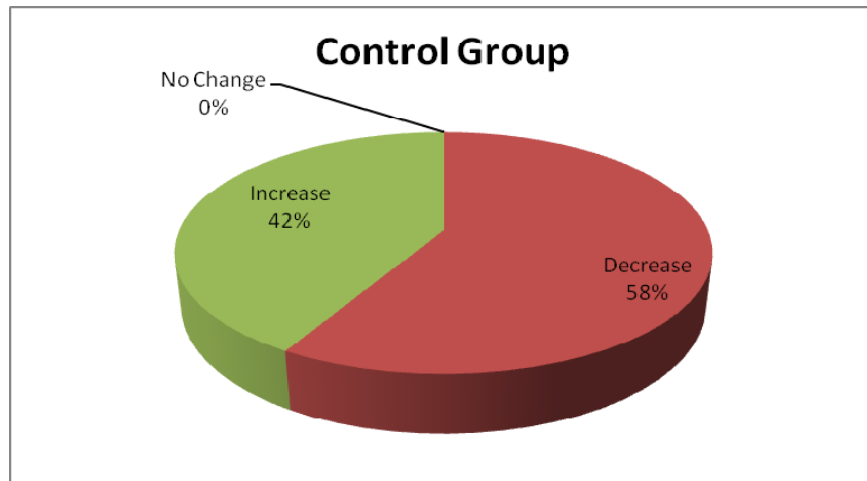
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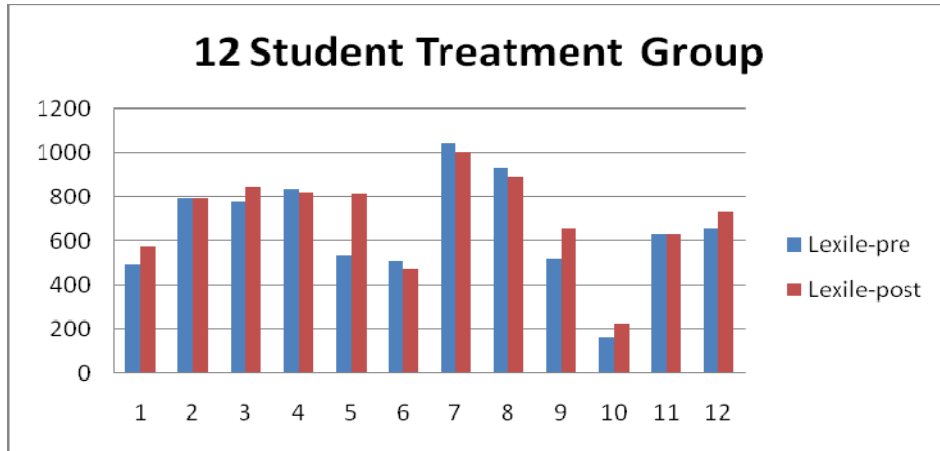
Graph 1. Monday and Friday fluency assessment.



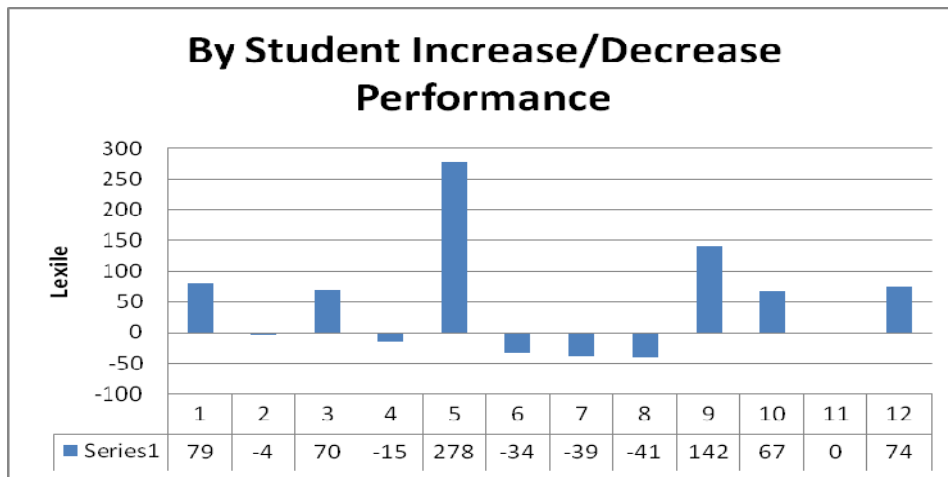
Graph 2.-Treatment group AIMSweb pre and post-assessment.



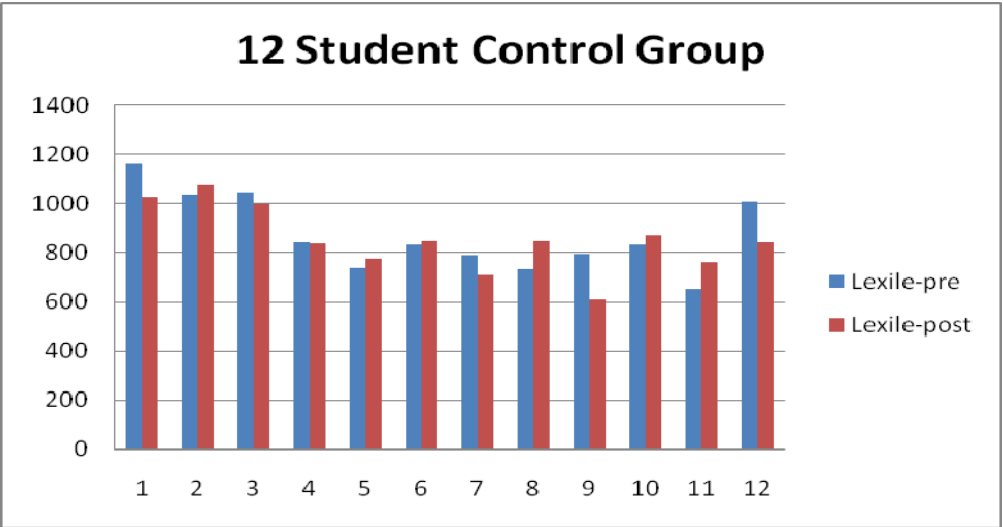
Graph 3. Control group AIMSweb pre- and post-assessment.



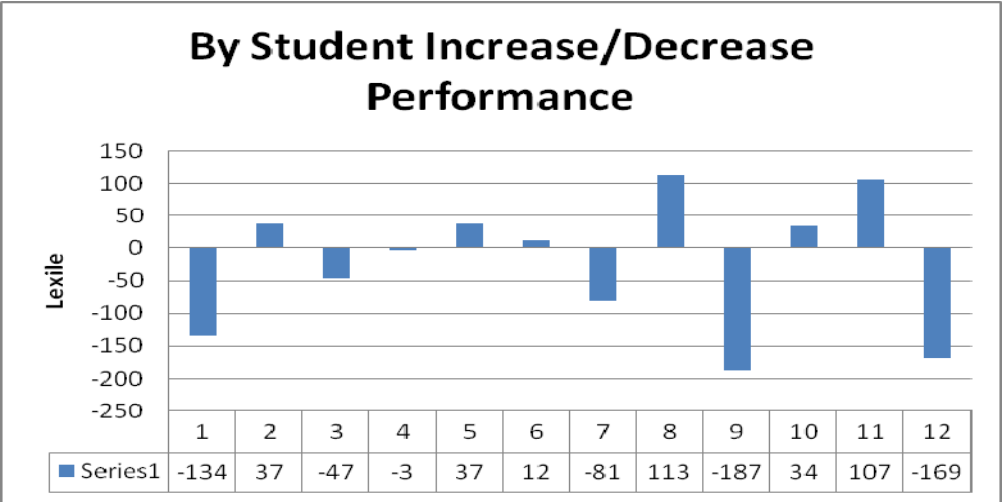
Graph 4. Treatment group pre- and post-SRI assessment.



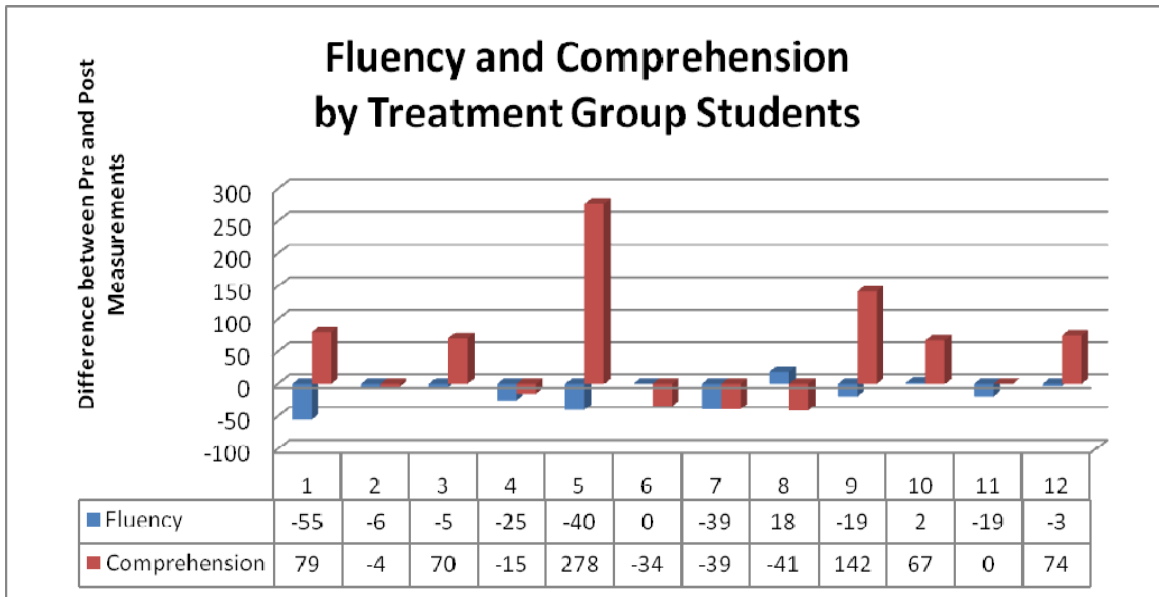
Graph 5. Treatment group increase/decrease from the pre- and post-SRI assessment/



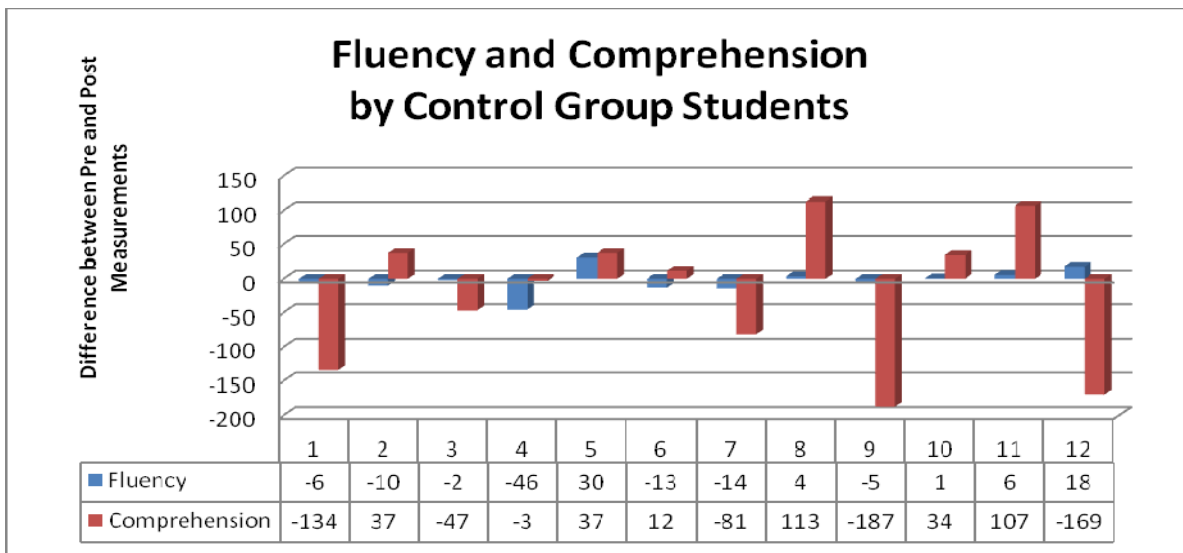
Graph 6. Control group pre- and post-SRI assessment.



Graph 7. Control group increase/decrease from the pre- and post-SRI assessment.



Graph 8. Treatment group fluency and comprehension.



Graph 9. Control group fluency and comprehension.

Appendix A

National Oral Reading Fluency Benchmarks

| | Fluency (WPM) Norms | | | GE reading level | | |
|-----------------------|---------------------|------|-------|------------------|------|---------|
| | Sept. | Jan. | May | Sept. | Jan. | May |
| Kdg. | | | 12-14 | | | k.8-k.9 |
| 1 st Grade | 15 | 25 | 45 | 1.0 | 1.5 | 1.8 |
| 2 nd Grade | 50 | 70 | 90 | 2.0 | 2.5 | 2.8 |
| 3 rd Grade | 85 | 95 | 110 | 3.0 | 3.5 | 3.8 |
| 4 th Grade | 100 | 110 | 120 | 4.0 | 4.5 | 4.8 |
| 5 th Grade | 110 | 116 | 125 | 5.0 | 5.5 | 5.8 |
| 6 th Grade | 120 | 125 | 130 | 6.0 | 6.5 | 6.8 |
| 7 th Grade | 125 | 130 | 135 | 7.0 | 7.5 | 7.8 |
| 8 th Grade | 140 | 145 | 150 | 8.0 | 8.5 | 8.8 |
| 9 th Grade | 150 | 155 | 160 | 9.0 | 9.5 | 9.8 |
| Gr. 10-12 | 165 | 170 | 175 | 10.0 | 10.5 | 10.8 |

Appendix B

Grade Equivalent to Lexile Counts

| Grade | Lexile number |
|---------|---------------|
| 1 | 100-400 |
| 2 | 300-600 |
| 3 | 500-800 |
| 4 | 600-900 |
| 5 | 700-1000 |
| 6 | 800-1050 |
| 7 | 850-1100 |
| 8 | 900-1150 |
| 9 | 1000-1200 |
| 10 | 1025-1250 |
| 11 & 12 | 1050-1300 |

Appendix C

Weekly Monday/Friday Progress Monitoring

| Week # | Students | | | | | | | | | | | |
|---------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Week 1A | 105 | 110 | 150 | 110 | 120 | 125 | 135 | 105 | 125 | 65 | 125 | 115 |
| Week 1B | 150 | 155 | 185 | 135 | 140 | 135 | 175 | 165 | 135 | 105 | 140 | 145 |
| Week 2A | 110 | 155 | 185 | 110 | 120 | 115 | 180 | 135 | 135 | 60 | 145 | 135 |
| Week2B | 165 | 165 | 190 | 115 | 180 | 165 | 200 | | 145 | 105 | 150 | 155 |
| Week 3A | 105 | 135 | 175 | 135 | 135 | 135 | 165 | 135 | 115 | 85 | 130 | 95 |
| Week 3B | 170 | 165 | 210 | 155 | 180 | 180 | 200 | 145 | 145 | 100 | 155 | |
| Week 4A | 105 | 125 | 180 | 100 | 120 | 120 | 215 | 130 | 115 | 80 | 150 | 115 |
| Week 4B | 165 | 165 | 205 | | 140 | 150 | 200 | 160 | 145 | 105 | 160 | 130 |
| Week 5A | 110 | 115 | 165 | 95 | 130 | 120 | 180 | 110 | 120 | 70 | 155 | 125 |
| Week 5B | 140 | 145 | 180 | 135 | 155 | 155 | 200 | 165 | 145 | 100 | 165 | 135 |
| Week 6A | 145 | 135 | 175 | 130 | 155 | 165 | 150 | 155 | 140 | 90 | 155 | 126 |
| Week 6B | 160 | 160 | 180 | 160 | 190 | 150 | 175 | 176 | 153 | 96 | 164 | |
| Week 7A | 135 | 125 | 175 | 135 | 160 | 160 | 169 | 154 | 119 | 74 | 155 | 171 |
| Week 7B | 160 | 165 | 180 | 150 | 195 | 160 | | | 163 | 75 | 164 | 142 |
| Week 8A | 110 | 130 | 170 | 100 | 165 | 130 | 177 | 142 | 132 | 68 | 151 | 125 |
| Week 8B | 145 | 160 | 170 | 150 | 165 | 170 | 183 | 164 | 135 | 75 | 150 | |
| Week 9A | 115 | 125 | 150 | 160 | 160 | 150 | 225 | 183 | 156 | 89 | 148 | 131 |
| Week 9B | 145 | 155 | 175 | 170 | | 175 | 249 | 162 | 138 | 109 | 186 | 169 |
| Week10A | 130 | 130 | 150 | 135 | 135 | 170 | 198 | 160 | 125 | 87 | 183 | 144 |
| Week10B | 155 | 165 | 182 | 160 | 195 | 177 | 261 | 203 | 150 | 107 | 193 | |
| Week11A | 139 | 171 | 162 | 154 | 213 | 184 | 206 | 158 | 128 | 81 | 166 | 122 |
| Week11B | 168 | 173 | | | | 163 | | | | | | |
| Week12A | 95 | 156 | 161 | 124 | 124 | 151 | 221 | 179 | 112 | 81 | 196 | 146 |
| Week12B | 150 | 170 | 204 | 180 | 204 | 165 | 227 | 202 | 170 | 116 | 198 | 193 |

Appendix D

Treatment Group

| Student | Aims-Pre | Aims-Pos |
|---------|----------|----------|
| 1 | 137 | 82 |
| 2 | 110 | 104 |
| 3 | 160 | 155 |
| 4 | 148 | 123 |
| 5 | 177 | 137 |
| 6 | 121 | 121 |
| 7 | 165 | 126 |
| 8 | 90 | 108 |
| 9 | 114 | 95 |
| 10 | 58 | 60 |
| 11 | 170 | 151 |
| 12 | 113 | 110 |

Appendix E

Control Group

| Student | Aims-Pre | Aims-Pos |
|---------|----------|----------|
| 1 | 160 | 154 |
| 2 | 119 | 109 |
| 3 | 172 | 170 |
| 4 | 183 | 137 |
| 5 | 170 | 200 |
| 6 | 143 | 130 |
| 7 | 127 | 113 |
| 8 | 101 | 105 |
| 9 | 165 | 160 |
| 10 | 114 | 115 |
| 11 | 74 | 80 |
| 12 | 150 | 168 |

Appendix F

Treatment Group

| Students | Lexile-pre | Lexile-post | Increase/Decrease |
|-----------|------------|-------------|-------------------|
| 1 | 495 | 574 | 79 |
| 2 | 795 | 791 | -4 |
| 3 | 775 | 845 | 70 |
| 4 | 837 | 822 | -15 |
| 5 | 535 | 813 | 278 |
| 6 | 508 | 474 | -34 |
| 7 | 1044 | 1005 | -39 |
| 8 | 933 | 892 | -41 |
| 9 | 515 | 657 | 142 |
| 10 | 159 | 226 | 67 |
| 11 | 631 | 631 | 0 |
| 12 | 660 | 734 | 74 |

Appendix G

Control Group

| Student | Lexile-pre | Lexile-post | Increase/Decrease |
|---------|------------|-------------|-------------------|
| 1 | 1163 | 1029 | -134 |
| 2 | 1038 | 1075 | 37 |
| 3 | 1044 | 997 | -47 |
| 4 | 841 | 838 | -3 |
| 5 | 740 | 777 | 37 |
| 6 | 834 | 846 | 12 |
| 7 | 791 | 710 | -81 |
| 8 | 734 | 847 | 113 |
| 9 | 797 | 610 | -187 |
| 10 | 835 | 869 | 34 |
| 11 | 654 | 761 | 107 |
| 12 | 1011 | 842 | -169 |