Effect on Reading Fluency of Struggling Third Grade Students: Computer-Assisted Intervention versus Teacher-Guided Intervention

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Abstract

This research study examined two intervention programs, Read Naturally (computer-assisted) and The Six-Minute Solution 9teacher-guided), for the purpose of finding their effects on reading fluency with 3rd grade students at an elementary school. The participants were from two separate third grade classrooms, randomly assigned to one of the two intervention programs. There were five participants in the Read Naturally program and four participants in The Six-Minute Solution program. Fluency, the word correct per minute (WCPM), was based on assessments through AIMSweb R-CBM fluency probes. The data was analyzed to determine which program has a greater effect on fluency. Results from posttest scores indicated that after four weeks of intervention, there was an increase in fluency in both programs. However; the Read Naturally program showed a significantly higher rate of wcpm (words correct per minute). Results show that repeated reading programs help increase reading fluency. Educators need to see the significance in repeated reading programs and the positive effect it can have on increasing reading fluency.

Introduction

Twenty years ago, fluency was simply defined as a reader's number of words read per minute, minus the number of words missed. While we have come a long way from that, fluency is still struggling to be more than just a reader's ability to be able to read fast. It is a critical part of reading that allows readers to quickly and efficiently identify and link words for comprehension. According to the U.S. Department of Education in 2002, fluency is defined as "the ability to read with accuracy, and with an appropriate rate, expression, and phrasing". ("Student achievement and," 2002). Today fluency requires a much more complex definition of involving stemming beyond accuracy, rate, expression, and phrasing. It is defined as "the ability to read rapidly with ease and accuracy, and to read with appropriate expression and phrasing. It involves a long incremental process and text comprehension is the expected outcome" (Grabe, 2010, *p. 72*). There is a growing national concern for children and their lack of their ability to achieve fluency in reading. The National Assessment of Educational Progress (NAEP) "found that 44% of fourth graders are lacking in reading fluency; only 28% of eighth graders and 34% of twelfth graders achieve proficient reading standards." (Abadiano & Turner, 2005, p. 50). Based on reading scores of fourth grade students in 2011, the NAEP also showed 68% were reading at or below level. (Swain, Leader-Janssen, Conley 2013).

Fluency is of greater importance for reading because it acts as a bridge between word acknowledgement and comprehension. ("Student achievement and," 2002). Unfortunately, there is not a lot of emphasis on a student's fluency during reading instruction. As indicated by Timothy Rasinski, "fluency is often taught as a separate area of the reading curriculum, distinct and apart from authentic reading students do during guided reading or reading workshop - a time when the teacher's stopwatch comes out and students read orally for speed". (Rasinski, 2012, p. 517). Fluency has been found to have much more significance than simply the speed of word recognition with oral reading. The rate at which fluency occurs, ultimately impacts the depth at which comprehension ensues. As we all know, we are all equipped with a certain amount of attention or what Rasinski has called "cognitive energy" (Rasinkski, 2012). In effect, a reader who uses up too much of their "cognitive energy" decoding words during reading, have very little attention left for comprehension. This low fluency and struggle with decoding words, slows down a child's process of true reading.

Most elementary schools curriculums do not place a heavy emphasis on fluency. However; research has shown that there should be an increased emphasis upon fluency within literacy programs. More so, fluency should stem from elementary, extending well beyond into

secondary grades. Most people assume that fluency is a beginning level reading skill which is mastered at an early age, therefore; not something that needs to be addressed in later grade levels. This is a misconception that needs to be reformed because "a growing number of studies are demonstrating that fluency is a major concern for students in grades 4 and 5, in middle school, and in high school" (Rasinski, 2012, p. 521). According to Rasinski, "research has demonstrated that authentic fluency instruction can indeed improve students' reading fluency, comprehension, and attitude toward reading." (Rasinski, 2012, p. 521). Implicit learning is gradual, initially very fragile, and strongly based in repetition of form and process over a long period of time (Grabe, 2010). Essentially, fluency is not just a requirement for emergent reading instruction. Rather, it is a necessary and integral part of the reading curriculum which requires continuous instruction throughout a child's entire education. A lack of instructional fluency outside of elementary years can critically impact a student's ability to increase fluency throughout their educational years and beyond.

One clear impact on reading fluency is the use of *deep reading* or what is more commonly referred to as repeated reading. Repeated reading has many positive effects for students who struggle with reading fluency. It allows students to be able to improve on "word recognition accuracy, automaticity, comprehension, and attitude toward reading." (Rasinski, 2012, p. 518). Through repetitive reading of passages, students decrease their decoding time which allows the additional time to be focused on finding meaning in what they are reading. As students become more fluent in their repetitive reading of passages, subsequent passages of equal or greater difficulty became easier. (Rasinski, 2010). In a study by Morgan and Lyon, repeated reading done with struggling eleventh grade readers, showed advances of eleven months within a six month period. (Rasinski, 2010).

Within a Forsyth county elementary school, there are two programs that are utilized for fluency intervention; Read Naturally and Six-Minute Solution. After interviewing an administrator at the school, they indicated that there was no specific reason why these two programs were selected as intervention tools. However; the administrator added that they were county approved, researched-based programs that could be used for student's struggling with reading fluency and for progress monitoring data.

Statement of Research Problem

Is there any difference between Six-Minute Solution and Read Naturally in their effect on students reading fluency? If so, which intervention is more effective? This research study was to investigate the comparative effects of two reading intervention programs, Read Naturally verses Six-Minute Solution on the reading fluency of struggling third grade readers.

Definition of Terms Used in this Study

AIMSweb – Is defined as, Achievement Improvement Monitoring System, which is an instrument used as a researched based screening and progress monitoring system.

CBM – Is defined as curriculum-based measurement, which is a set of standardized and well-researched procedures for assessing and monitoring students' progress in reading, math, spelling, and writing. (Hasbrouck & Tindal, 2006).

Cold Read – Is defined as the reading of a passage during an assessment which has not been seen or read before by a student.

Hot Read – Is defined as the reading of a passage during an assessment which has been seen and practiced with multiple times to achieve fluency mastery.
Fluency errors – Is defined as errors during a fluency read that include any words that are replaced, skipped, articulated incorrectly, or read out of order.
ORF – Is defined as oral reading fluency.
Reading Fluency – For this study, reading fluency is defined as how quickly and efficiently a student can read a passage in a minute, minus any errors recorded by the researcher.
R-CBM – Is defined as reading curriculum based measure of reading fluency.
RTI - Is defined as response to intervention, which is a process that schools can use to help children who are struggling academically or behaviorally. Based on the schools policies, students are tiered based on the severity of their needs.
Words Correct Per Minute (WCPM) – Is defined as the number of words read per minute, minus fluency errors.

Review of Literature

Fluency through time

Over the last 40 years, there has been a great deal of research done on reading fluency and its effect on school aged children. In the beginning, fluency was nothing more than taking out a timer and testing a student for "speed" reading. Over the span of thirty-five years, fluency has increased in its importance to reading literacy and is struggling for its place in the reading program. Studies have shown that fluency has evolved into "the ability to read rapidly with ease and accuracy, and to read with appropriate expression and phrasing. It involves a long incremental process and text comprehension is the expected outcome" (Grabe, 2010, p.72). Curriculum-based measurements have been used to assess oral reading fluency (ORF), which focus on rate and accuracy. A teacher will assess fluency by listening to a student orally read a "cold" passage for 1 minute. Then, WCPM is calculated by subtracting the number of errors from the total number of words read per minute. Hasbrouck and Tindal note "WCPM has been shown, in both theoretical and empirical research, to serve as an accurate and powerful indicator of overall reading competence, especially in its strong correlation with comprehension. The validity and reliability of these two measures have been well established in a body of research extending over the past 25 years." (Hasbrouck & Tindal, 2006, p. 636).

Importance of Fluency

There has been a great deal of discussion and studies focused on the importance of fluency and its effect on reading achievement. A study done by Jane Ashby demonstrated the importance of foundations of reading fluency. The study was done on second graders to investigate how phonemic awareness contributes to reading fluency one year later in third grade. Relationships between second and third grade were then compared and found that "the time that children spent on fixating the match-the-last-sound target in the phonemic task in Grade 2 accounted for nearly 42% of the variance in total time during silent reading in third grade; children who processed the phoneme target faster before choosing it also read silently at a faster rate than did children who processed the target slowly." (Ashby, 2013, p. 8). The findings showed how reading fluency in second and third grade contributed to the academic success of silent reading fluency in fourth grade and beyond. (Ashby, 2013).

Students who show signs of early fluency struggles, are believed to be potential candidates of learning disabilities. Without proper intervention, it can severely and negatively impact a student's future, both academically and beyond. Cevriye ERGÜL analyzed struggling third grade readers fluency and accuracy to determine if they were at risk of learning disabilities which ultimately effected their reading success rate throughout their educational years. ERGÜL notes that "longitudinal studies have shown that reading problems of students with reading difficulties continue through the school years…88% of student who are poor readers at the end of first grade remain poor readers in fourth grade." (Dickenson & McCabe, 2001, p. 2051). A second study by Cunningham and Stanovich, who followed students from first grade through 11th grade, found that "students oral reading rate in first grade strongly predicts student' reading comprehension and vocabulary in 11th grade." (Cunningham & Stanovich, 1997, p. 936). The reading accuracy of the participants in ERGÜL's study were categorized into three groups: independent (96 – 100% accuracy), instructional (90 – 94% accuracy), and frustration (89% and below). Overall, the data from this study showed that the frequency of incorrect words read correlated with the frustration level of the student. For the frustration group, the mean frequency of incorrect reading was 14.98, instructional at 4.18, and 1.54 for independent. (ERGÜL, 2012). The results of ERGÜL's studies with identifying struggling readers of the frustration group, are similar to the findings of Maureen Lovett, whose studies further supported that the frustration group of the study showed characteristics of both reading slow and inaccurately. (Lovett, 1987). ERGÜL's study of reading performance is further supported by several other studies which also show that the frustration group level display the same difficulties of reading skills and are typically 2.5 to 3 years behind their grade level. (Badian, 1996; Krug, 1996; Lovett et al., 2000; Meyer et al., 1998; Wolf & Bowers, 1999).

Studies have shown that without reading fluency, students spend most of their time decoding and losing comprehension retention. By strengthening phonemic awareness and fluency, students are able to focus more on comprehension and less time on decoding. A pretest/posttest pre-experimental research design was conducted by Neddenriep, Fritz, & Carrier to understand the relationship between changes in reading fluency and the positive correlation with comprehension at the individual level. (Neddenriep, Fritz, & Carrier, 2011). It also evaluated Markell and Deno's finding which also showed a positive relationship between reading fluency and comprehension at the individual level. (Markell, & Deno, 1997). The study was implemented for 15 weeks with 5 fourth grade-students. The data collection was done using AIMSweb R-CBM and MAZE Fall Benchmark Assessment Passages. The benchmark assessment were used to get the median scores of words correct per minute (WCPM) for each student. Collection of three baseline data points in addition to R-CBM and MAZE were used from Great Leaps program. They included combination practice, performance feedback and error correction. The results of the data provided numbers associated with errors per minute for baseline, practice, practice + performance, and practice + performance + error correction. For one student, the data showed a 23% increase and an effect size of 2.14 which showed an increase in comprehension had increased by an improvement rate of .08 word correctly selected per week in assessed Maze passages. (Neddenriep, Fritz, & Carrier, 2011). Students overall showed an increase of 25% over baseline assessments. This showed an average gain of 15 words from baseline to intervention and an average effect size of 1.25. (Neddenriep, Fritz, & Carrier, 2011). Four out of the five participants showed an increase in comprehension which extended beyond

the normal 4th grade growth rate with ROI = .39. (Neddenriep, Fritz, & Carrier, 2011). Overall, the study showed a positive correlation between a students' reading fluency and comprehension.

Fluency Assessments

There are 4 categories of reading assessment: screening, diagnostic, progress monitoring, and outcome. Screening measures are "brief assessments that focus on critical reading skills that predict future reading growth and development." (Hasbrouck & Tindal, 2006, p.638). Diagnostic measures are assessments done at any time of the year to help drive a student's instructional direction. Progress-monitoring measures are assessments which are done at minimum three times a year or as a routine progress check which is weekly, monthly, or quarterly. (Hasbrouck & Tindal, 2006). These progress monitoring tools are also usually required for students who require Response To Intervention (RTI). There have been concerns about using fluency measures as a screening tool, due to its short, single, and isolated reading skill to ascertain a student's proficiency. (Hasbrouck & Tindal, 2006). In 1992, Hasbrouck and Tindal created a table that contained ORF WCPM norms for grades first through eighth. For third grade, the norms indicated that beginning of the year WCPM should be above 71 in order to be considered in the 50th percentile. To identify if a student is struggling with reading fluency, an educator can compare a student's WCPM score to the score from that student's grade level for that period. (Hasbrouck & Tindal, 2006).

Repeated Reading Strategy

A study conducted by W. J. Therrian, showed that repeated reading has a positive effect in improving reading fluency in both students with and without learning disabilities. Therrian used participants ranging from ages 5 to 18 years and utilized 18 different studies to support his findings. It compared non-transfer (i.e. ability to fluently read or comprehend the same passage after reading it multiple times) and transfer (i.e. ability to fluently read or comprehend a different passages several times) in which both showed positive effects of repeated reading (Therrien, 2004). Therrien used Cohen's criteria for interpreting data collected in the studies and found that fluency-increase effect size was 0.83. Based on Cohen's criteria, this was within the range of large effect sizes; large ES> 0.80. (Therrien, 2004).

The effectiveness of three fluency interventions: repeated reading, audio listening passage preview, and teacher modeled listening passage preview, was conducted in a study by Swain, Leader-Janssen, and Conley. This study implemented all three interventions to determine which had a greater effect on reading fluency. The data collected demonstrated that all three interventions provided increases in reading performance. (Swain, Leader-Janssen, Conley 2013). With a baseline of 82 WCPM, which is at a 10th percentile for fifth grade, the repeated reading instruction provide an improvement rate of 1.34 with 104 words read correctly at the end of study. (Swain, Leader-Janssen, Conley 2013). Rasinski also did a comparison of repeated reading and listening while reading with third graders and found that both methods proved to be equally successful in increasing reading fluency. (Rasinski, 1990). The studies of repeated reading as an intervention tool by Rasinski, Swain, Leader-Janssen, & Conley is consistent with the research base,... supporting the interventions of repeated reading and listening passage preview as effective methods of increasing fluency as each measure demonstrated growth. (Begeny et al., 2009; Chard et al., 2002; Therrien, 2004). These studies further note that in

order for these interventions to have continued success, instruction must be continual in order for fluency to be maintained and increased over long periods of time. (Swain, Leader-Janssen, Conley 2013).

Due to the proven importance of reading fluency through research, it is critical that it is integrated into reading curriculums at elementary levels and beyond. Studies have shown that there are associations between reading fluency and comprehension. In addition, research has also identified reading fluency as a precursor as to how successful a reader will be as they get older. The strategy identified as having the most impact on reading fluency is repetitive reading. Providing support programs within schools to help increase reading fluency is vital for students, especially at the elementary level. This study will examine the comparative effects of reading fluency achievement through two different fluency programs, Read Naturally and Six Minute Solution. Both of these programs utilize the strategy of repeated reading, which, based on research findings, are proven effective approaches. While the strategy used is similar in both programs, one major difference is that The Six-Minute Solution is paper based and Read Naturally is computer driven. This research study is to determine which program is most effective in increasing reading fluency.

Read Naturally

A quantitative research done by "What Works Clearinghouse" on the supplemental reading program, Read Naturally, was to determine its effectiveness on improving reading fluency, accuracy, and comprehension of elementary and middle school students. This article is a non-experimental, ex post facto design, due to the fact that this report compared research that was already completed and used an intervention and comparison group. The studies selected were using a criteria that had subjects that were as similar as possible. The report states that "it identified 58 studies that investigated the effects of Read Naturally on the reading skill of beginning readers" ("What works clearinghouse," 2013, p. 4). The 58 studies then went through a selection process to determine if they met the What Works Clearinghouse (WWC) against evidence standards. Of the 58 studies, 47 were removed during the review because they did not meet the WWC eligibility screens for the topic. Of the remaining 11 studies that met the standards: 4 were considered randomized control without reservations, 1 was quasi-experimental with reservations, and the remaining 6 studies did not meet WCC standards. Pretest scores, grade, race, and gender were used to select participants for each study. Then participants were randomly selected for the Read Naturally or comparison group. Various subtests were used for outcome measures. For reading fluency, the number of studies reviewed was 4, containing 440 students, and overall the rating of effectiveness of reading fluency showed mixed effects of +7 in a range of +1 to +18. ("What works clearinghouse," 2013).

The Six-Minute Solution

The intervention program, The Six-Minute Solution, has been field tested to show its effectiveness at increasing fluency. The results of a field test show that the program increased fluency and comprehension. ("The Six-Minute Solution," n.d.). The first field test was conducted in 1999 at Meadowbrook Middle School to help at-risk middle school students. Fifty-two students participated in the 24-day summer school intervention program and attended a reading class for two hours a day Monday through Friday. Reading gains for most students

recorded by the summer intervention program were outstanding. The average reading fluency gain was 36 percent and the overall growth in reading comprehension was 26 percent. ("The Six-Minute Solution," n.d.). An action research project was also conducted to determine the outcome of implementing the intervention, The Six-Minute Solution, on student oral reading fluency scores. The research study consisting of one group of three third graders and one fourth grader and another group consisting of three fourth graders took place at Rita Murphy Elementary School in Bismark, North Dakota. Four data sources included a district required assessment; AIMSweb benchmark and progress monitoring, The Six-Minute Solution placement test/daily progress monitoring, teacher observation, and finally a student survey. Students found the exercise motivating and beneficial, as an increase in oral reading fluency was noted. The results indicated The Six-Minute Solution was effective in raising reading fluency scores. (Hanzal, 2013). According to a field test and action research project The Six-Minute Solution research-based intervention is a highly successful reading fluency program.

To summarize, fluency has evolved over time, but this aged skill has shown the significant effect it has on improving reading and comprehension. The importance of providing fluency instruction is a necessity for success in reading in school aged children and beyond. Improving fluency allows students to spend less time decoding and identifying terminology and more time increasing comprehension retention. Reading fluency should be a core part of any reading program, especially in the elementary level where reading growth is exponential. Providing students with an appropriate reading fluency intervention programs such as Read Naturally or The Six-Minute Solution, can help strengthen their ability to accurately read, comprehend, and prevent future learning disabilities.

Research Methodology

Overview of the Project

This study examined two research-based fluency intervention programs to determine their effects on third grade students who are struggling with reading fluency. The programs researched were selected because they are currently being utilized within the school, are progress monitored, and designed specifically for reading fluency. Two third grade teachers, acting as researchers, collaborated in conducting this action research project. Both teachers were located at the same elementary school and are on the same third grade team. The study was a quasi-experimental research design using two existing third grade classes with unknown equivalency. A coin was flipped to determine which program each teacher would be assigned. Teacher A was randomly assigned the Read Naturally intervention program, and Teacher B was assigned Six-Minute Solution. Teacher A's classroom contains twenty-two students and Teacher B contains twenty-five.

A purposeful sampling from each teacher's classroom was completed through AIMSweb, using a researched based Universal Screening test called R-CBM. The AIMSweb screening was done by trained professional teachers (ESOL/EIP certified) who have been administering the test for six or more years. The data collected was entered into the AIMSweb system. The results were used to identify a group of students who ranked in the lowest range for words per minute (wpm) or the fifty percent or lower compared to third grade norms. These students were assigned to whichever program their teacher was randomly assigned. Each group was designated

as Teacher A/Group A (Read Naturally, computer-based) and Teacher B/Group B (The Six-Minute Solution, paper-based) respectively.

The study was conducted over a four week period beginning February 18 through March 14, 2014 between Teacher A/Group A and Teacher B/Group B. Both teachers provided their specified intervention program four days a week for thirty minute sessions, with a progress monitor screening of the same passage for both groups on the fifth day. Group A received Read Naturally, a computer-based intervention program by Teacher A. A paper-based intervention program, The Six-Minute Solution, was administered to Group B, by Teacher B. Both intervention tools use repeated reading of passages as the basis of instruction. In Group A, the students selected a story and reviewed the vocabulary words in the story which are read by the narrator of the program. Then, the teacher listened to the student read the passage as a "cold read" to determine a baseline WCPM. The student independently followed along and listened to the passage as it was read aloud to them three times. After listening, the student's verbally read aloud three additional times on their own. Once completed, the teacher entered in a password to begin a one minute timed test. After the student finished reading, the number of mistakes was entered into the program to calculate the WCPM. The fluency goal for all participants in the study will be based on the national norms from AIMSweb. A student successfully passed if they had reached this pre-determined goal. Once the student passed their fluency goal, they were allowed to continue to the next story. If they did not reach their goal, they continued practicing to be re-assessed. This could result in a student reading more than one story in a week. In Group B, students were given a story at the beginning of each of the four weeks, for a total of four stories. The teacher listened to a student read a new passage for the first time to a partner student who is at the same reading level and also in the program. The student listening recorded errors which determined a baseline WCPM. Then students switched roles and their baselines for the story were graphed on their own chart. Students were required to read the story for the rest of the week, thirty minutes a day. The repeated reading during the week was with the teacher, self, or other students. On the fourth day, they did a final reading to each other with the teacher supervising. Both the beginning and end readings were timed for one minute and the WCPM were graphed. The students moved on to next story, regardless of meeting the WCPM or not.

Read Naturally

Read Naturally is a research and computer-based program that utilizes repetition as the basis for increasing fluency. The program is designed to combine teacher modeling, repeated reading, and progress monitoring — three strategies that research has shown are effective in improving students' reading proficiency. Using audio support and graphs of their progress, students' work with high-interest material at their skill level. ("The read naturally," 2013, paragraph 1). Prior to beginning, students do a *cold* read of the passage for the teacher. This provides WCPM baseline. Once a baseline had been established, the teacher modeling phase begins. Students listen to a fluent reader read passages while correctly modeling correct pronunciation, expression, and phrasing. ("The read naturally," 2013, paragraph 2). Students follow along as the words are highlighted as they are being read to them. According to the program, "With teacher modeling, a proficient reader models good, correct reading for a less able reader." ("The read naturally," 2013, paragraph 2). The second phase is repeated reading,

which another strategy that research has shown improves fluency is. ("The read naturally," 2013). After listening to a proficient reader read a passage 3 times, students practiced reading aloud until they achieved their pre-determined goal that has been entered for them. Read Naturally indicates that student achievement and mastery of each story builds students' fluency and confidence. ("The read naturally," 2013). The last phase of Read Naturally is daily progress monitoring of students' progress. When a student has completed phase one and two, they can then do their *hot* read for the teacher. This is used to determine the students' achievement on reading fluency and allows the teacher to be able to go back and have a student continue practicing passages again until mastery has been achieved. ("The read naturally," 2013). A student must have successfully achieved their goal in order to move onto the next passage of their choice.

The Six-Minute Solution

The Six-Minute Solution is a research and paper-based program that also uses repeated reading as a strategy for increased reading fluency. Paired student reading techniques are also part of the Six-Minute Solution program. The program cites that, "In just six minutes per day, teachers can implement proven fluency instruction, while students take measured steps toward reading success" ("The Six-Minute Solution," n.d.). For this program, students need a timer, a portfolio containing two copies of the same grade-level practice passage, a fluency graph, and a blue and red colored crayon or pencil. The teacher meets with all participating students individually to collect "cold read" data at the start of each story, usually on a Monday so that it can finish on a Friday. After timing the cold read for one minute to calculate their wcpm, the teacher will then conference with each student to go over passage results and review any unknown vocabulary. The student then records the "cold read" wcpm on their fluency graph. Once students have cold read data graphed and passage reviewed, they will begin the six minute fluency check. Students will take the cold read passage and they will continue to practice reading the same passage every day with a buddy. At the end of the week, the teacher does a one minute timed "hot read" to determine the new wcpm and then graphed on fluency chart. Then, the teacher and student review the comparison data between hot and cold read. The use of both paired and repeated reading techniques is proven to be effective strategies for increasing fluency and comprehension. The materials used were designed especially for students and are easy to follow and use. With The Six-Minute Solution, students are assessing themselves once a week to determine cold and hot read scores. Students can visually see their progress achieved by graphing this data on a chart provided for them. This visual data in combination with paired grouping is conducive for providing students the motivation and encouragement that they need. The "*Six Minute Solution* lends itself to flexible use in a variety of settings and can be used with the entire classroom where students work in pairs, during small group teacher-led instruction, with cross-age pairs, and with students working individually" ("The Six-Minute Solution,"n.d.).

Essentially both programs utilize repetition as the main strategy for increasing reading fluency. Both programs also accomplish progress monitoring through the use of a cold and hot reads. One of the major differences between the two programs is that Read Naturally is computer based whereas The Six-Minute Solution is paper-based. Another difference between the programs is that Read Naturally will not allow a student to progress to the next passage until

they have mastered their pre-determined goal. In the program The Six-Minute Solution the students get to choose a new passage every week, regardless if they have met their predetermined goal or not. A final variation between the programs is The Six-Minute Solution requires students to work in a partnership while Read Naturally requires students to work independently on the computer.

Research Question

Is there any difference between the two intervention methods, Read Naturally and The Six-Minute Solution in the effect on reading fluency of struggling third grade readers? If there is a difference, which instructional method, Read Naturally or The Six-Minute Solution is more effective?

Research Hypothesis

There is significant difference between the two intervention methods, Read Naturally and The Six-Minute Solution on the effect of reading fluency of struggling third grade readers.

Null hypothesis: There is no significant difference between the two intervention methods, Read Naturally and The Six-Minute Solution on the effect on reading fluency of struggling third grade readers.

The independent variable of this study is the intervention method (Read Naturally vs The Six-Minute Solution), and the dependent variable is reading fluency.

Description of Participants

Participants were selected from two teachers' third grade classrooms at an elementary school using purposeful sampling for this action research. Participants have not been retained and have been exposed to the same curriculum base at the school for at least 2 years. The elementary school participating in the study consists of 1,123 students. ("Student Profiles", 2013). Based on the Forsyth County R4 Dashboard, the student demographics are as follows: 21.99% Hispanic, 11.58% Asian, 4.81% Black (Non-Hispanic), 2.58% Multi-Racial, 58.15% White (Non-Hispanic), 47.02% Female, and 52.98% Male, 3.88% ESOL participation, 1.41% ESOL monitored, 17.17% receive free lunch, 4.03% receive reduced lunch, 18.1% served as Gifted, and 156 students are receiving Special Education. ("Student Profiles", 2013). Participants from Teacher A's class were randomly selected from a roster that consisted of eleven girls and eleven boys. The demographics for Class A include: five Hispanic/Latino, one Asian, 15 Caucasian, and one Native Hawaiian/Pacific Islander. ("Infinite Campus", 2013). Four students are served through special education, one served in EIP reading, three receive speech services, six attend Horizons gifted program, two are pulled for ESOL, and two who are IST/SST. ("Infinite Campus", 2013).

Participants from Teacher B's class were randomly selected from a roster that consists of ten girls and fifteen boys. The demographics for this class include: seven Hispanic/Latino, five Asian, 12 Caucasian, and one American Indian/Alaskan Native. ("Infinite Campus", 2013). Two are served in EIP reading, eight attend Horizons gifted program, six are pulled for ESOL services, and four who are IST/SST. ("Infinite Campus", 2013). A comparative of the demographics of the two classrooms are provided in *Table 1*. ("Infinite Campus", 2013).

Table 1 Demographic Comparison of Two Classrooms

	Teacher A – Read Naturally	Teacher B- The Six-Minute Solution
Students (Total)	22	25
Girls	11	10
Boys	11	15
ESOL	2	7
Horizons (Gifted)	6	8
IST/SST	2	4
Speech	3	0
EIP Reading	1	2
Race		
White	15	12
Hispanic/Latino	5	7
Asian	1	5
American Indian or Alaska Native	0	1
Native Hawaiian/Pacific Islander	1	0

A comparative of the selected participants demographics are shown in *Table 2*. The participants in the Read Naturally group consisted of five students, four boys and one girl with four being Caucasian and one native Hawaiian. Two of the participants receive special education services, two receive speech services, and one receives EIP Reading services. The Six-Minute Solution participating sample consisted of five boys at the beginning of the study. Three of these participants are Hispanic, one American Indian, and one Caucasian. Three of the participants receive ESOL services, two are SST, and two receive EIP Reading support. One of the five participants received a concussion during week three of the study and could no longer participate per doctor's orders. One major difference between the two study group samples is the support services provided. The Read Naturally group had two special education students and no ESOL, whereas; The Six-Minute Solution group had three ESOL and no special education.

Table 2: Participant Sample

	Read Naturally (Teacher A)	The Six-Minute Solution (Teacher B)
Students (Total)	5	4
Girls	1	0
Boys	4	4
ESOL	0	3
Horizons (Gifted)	0	0

Special Education	2	0
IST/SST	1	1
Speech	2	0
EIP Reading	1	1
Race		
White	4	1
Hispanic/Latino	0	3
Asian	0	0
American Indian or Alaska Native	0	0
Native Hawaiian/Pacific Islander	1	0

A purposeful sampling from Teacher A and Teacher B's classroom was completed through AIMSweb, using a researched based Universal Screening test called R-CBM. The R-CBM also served as a pre-test and provided our baseline WCPM. The AIMSweb screening was done by trained professional teachers (ESOL/EIP certified) who have been administering the test for six or more years. The data collected was entered into the AIMSweb system. The results was used to identify a group of students who ranked in the lowest range for words per minute (wpm) or the fifty percent or lower compared to third grade norms. Those students were then appointed to whichever program their teacher was randomly assigned. Each group was designated as Teacher A/Group A and Teacher B/Group B respectively. Teacher A and B have worked at the same elementary school, teaching third grade for the last three years. Both teachers use the same curriculum standards and collaborate on lesson plans which provided similar learning environments and teaching style. Teacher A has been teaching in general education for three years and taught one year before that in a MIMO (Mildly and Moderately Intellectually Disabled) classroom all within the state of Georgia. Teacher B has taught kindergarten through fourth grade over the last ten years between Florida and Georgia. Both teachers hold Bachelors of Education degrees and are currently pursuing a Master's degree in Early Childhood Education with a reading endorsement.

Data Collection

The instrument that was used is a researched based screening and progress monitoring system called Achievement Improvement Monitoring System or AIMSweb. The Universal Screening is given within a certain time frame in the fall, winter, and spring and compared against scores throughout the country. It consists of three R-CBM probes given one after another. Each probe is given a 1 minute time limit for a total of three minutes. A median score is calculated based on the three probes given. Individual data collected is norm-referenced based. "In norm-referenced interpretations, individual scores are compared to the scores of a well-defined norm (reference group) of others who have taken the same test." (McMillan, 2012, p. 148). AIMsweb program is a "commercially prepared and measures present knowledge and skills of a sample of relevant content." (McMillan, 2012, p. 151). In an excerpt from AIMsweb instructional guide, it states "Reading Curriculum-Based Measurement (R-CBM) is a brief, individually administered, standardized test of oral reading for grades 1 – 12." ("Aimsweb:

Reading curriculum-based," 2012, p.1). There were three pre-selected grade level probes that gave us a median score and determined baseline or starting point. This also was used to select the students for our sample groups. Each student was administered the R-CMB selected passage to read aloud for one minute. The number of WCPM was calculated to determine the R-CBM score. There were thirty-three grade level probes that we selected from for progress monitoring. The same progress monitoring probes will be used for each subject. The type of measurement being used is nominal scale.

"A nominal scale is one in which there are mutually exclusive categories, without any order implied. Mutually exclusive categories are those in which all observations assigned to the same category have similar characteristic, and they differ on the basis of a specific characteristic from observations in other categories" (McMillan, 2012, p. 119).

All subjects would mutually struggle with fluency. However; they would differ when it comes to background, gender, socioeconomic, education, home life, race, etc. According to the AIMSweb website, the validity for the R-CBM states that:

"More than thirty years of research has shown that listening to a child read graded passages aloud for 1 minute and calculating the number of words read correct per minute provides a highly reliable and valid measure of general reading achievement, including comprehension, for most students. This testing practice, Reading Curriculum-Based Measurement (R-CBM), has met the standards for use in Reading First as determined by the Secretary of Education's Committee on Reading Assessment and the National Center on Response to Intervention." ("Reading assessment resource," 2012, para. 1).

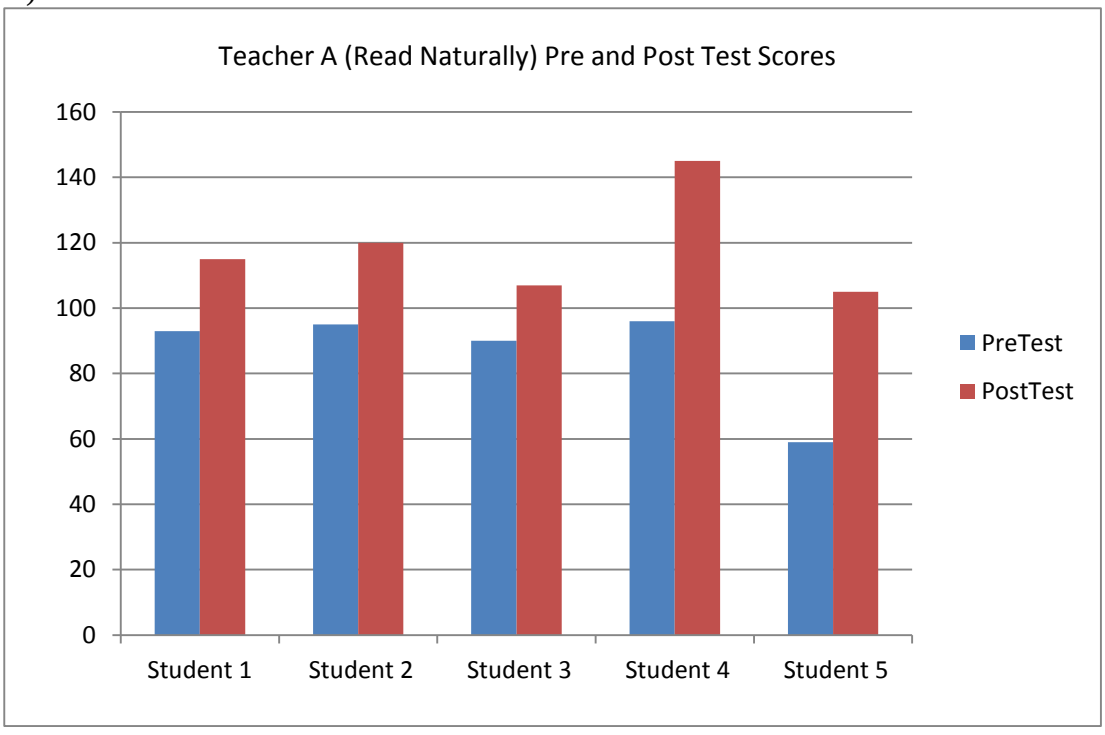
The R-CBM Universal screening test was given, as a pre-test, on January 8, 2014 to provide a baseline number for all participants, as well as, progress monitoring throughout the research. Once the pre-test was given, the data was used to select participants based on students who ranked in the lowest range for words per minute (wpm) or the fifty percent or lower compared to third grade norms. Students from Class A and B were then assigned to whichever program their teacher was randomly assigned. The interventions were conducted over a four week period beginning February 18 through March 14, 2014. Both teachers provided their specified intervention program four days a week for thirty minute sessions during that four week period. On the fifth day of each week, the same progress monitoring R-CBM tests were given to both experimental groups to assess fluency progress. There were a total of 4 progress monitoring probes. On Monday, March 17, a post-test was given to conclude the study. Each participating teacher received AIMSweb training from a certified AIMSweb teacher, on how to accurately administer the progress monitoring probes to each participant.

Data Analysis and Results

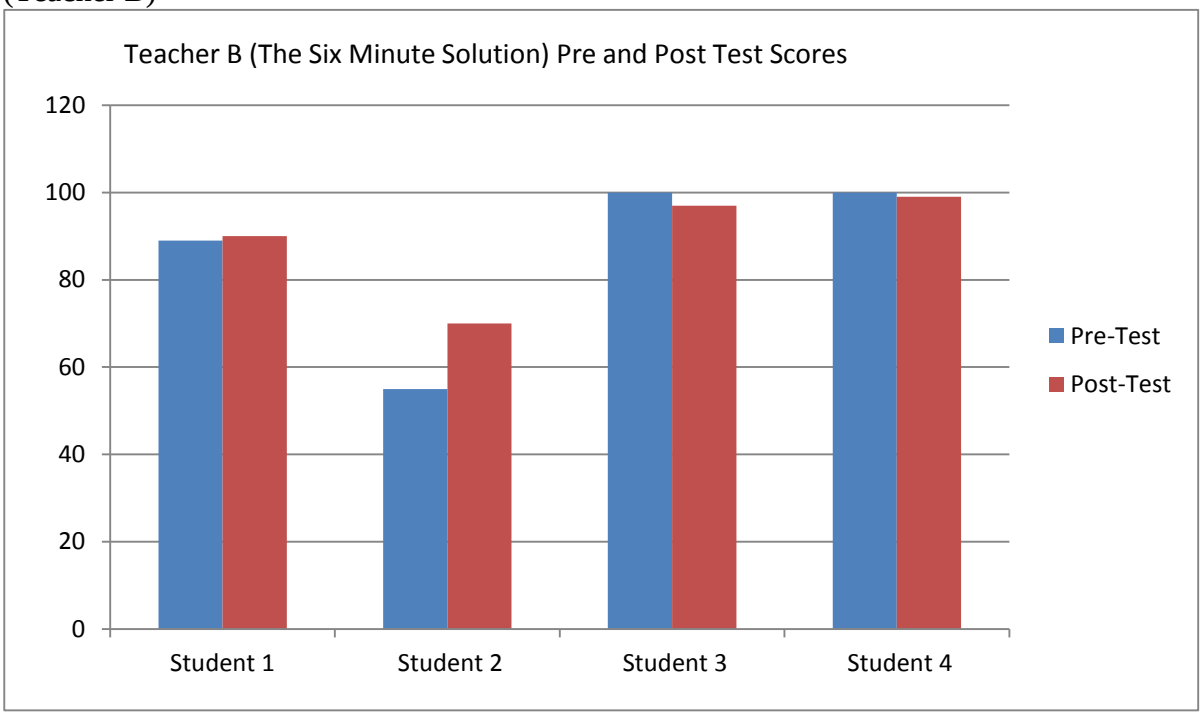
A quasi-experimental research design was conducted utilizing existing classes with unknown equivalency and pretest and posttest data. The independent variable of this study was the two intervention programs used for comparison; Read Naturally vs The Six-Minute Solution and the dependent variable was reading fluency. Quantitative data from pre and post test scores was collected from the AIMSweb Universal Screening. To test the research hypothesis and determine if there is different effect, a t-test was used to compare pretest and posttest scores in reading fluency of participants in the two programs, Read Naturally and The Six-Minute Solution. Pre-test data was collected for all participants by taking the average of three AIMSweb

universal screening passages. Each passage was timed for one minute and the wcpm was determined. All participants were given the same three pretest passages. The three reading passages were then averaged to provide a baseline from which to determine the amount of fluency growth (See Table 3). At the end of the four weeks of intervention, posttest data was collected for all participants by taking the average of three additional AIMSweb universal screening passages. Each passage was timed for one minute, words correct per minute determined, and then an average of the three calculated. Pretest and posttest data was analyzed to determine if any significant fluency growth had occurred. The use of unpaired t-test was used to gauge fluency results against the pre and post-test scores at the end of the study. The paired t-test compared R-CBM pre- and post-tests for the control group and for the experimental group separately. Final comparative results are presented in various bar graphs and tables to show effects of the intervention programs on students reading fluency. These results help address the research question, "Is there any difference between the two intervention methods, Read Naturally and The Six-Minute Solution in the effect on reading fluency of struggling third grade readers? If there is a difference, which instructional method, Read Naturally or The Six-Minute Solution is more effective?" Data collected from the participants are presented in the tables and graphs below.

Graph 1: Universal Screening Pretest and Posttest Results of the Read Naturally Group (Teacher A)



Graph 2: Universal Screening Pretest and Posttest Results of The Six-Minute Solution Group (Teacher B)



Graph 1 and Graph 2 shows a comparative analysis of the AIMSweb Universal Screening pretest results. The Six-Minute Solution results show that participants one and two made gains from the intervention, while participants three and four did not show growth. The Read Naturally intervention shows growth for all participants. It appears that Read Naturally had a more positive effect on student reading fluency.

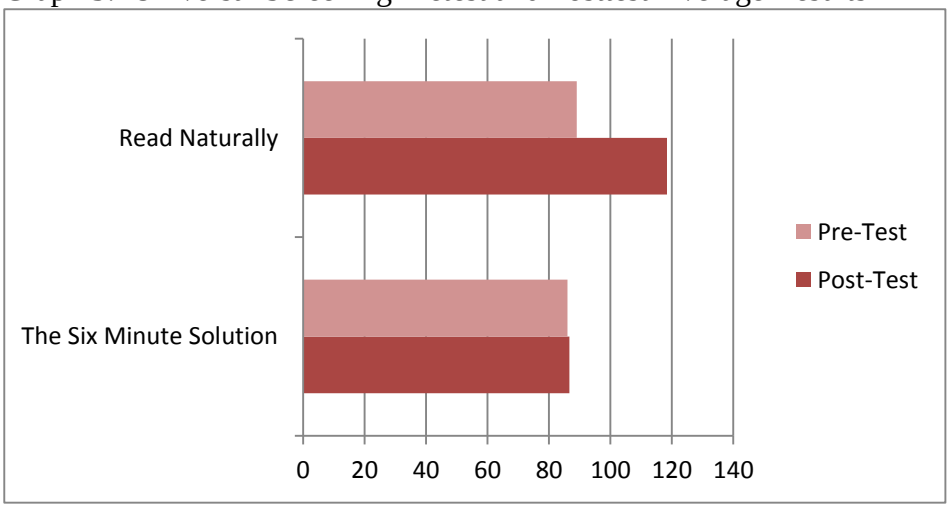
Table 3: Universal Screening Pretest and Posttest Results

Universal Screening Pretest and Posttest Results							
Read Naturally – Teacher A				The Six-Minute Solution – Teacher B			
Students	Pretest	Posttest	Change	Students	Pretest	Posttest	Change
1	93 wpm/ 1 error	115 wpm/ 3 errors	+22 wpm/ +1 errors	1	89 wpm/ 1 error	90 wpm/ 3 errors	+1 wpm/ +2 errors
2	95	120 wpm/	+25 wpm/	2	55	70 wpm/	+15

	wpm/ 1 error	1 error	no change		wpm/ 3 errors	5 errors	wpm/ +2 errors
3	90 wpm/ 0 errors	107 wpm/ 4 errors	+17 wpm/ +4 errors	3	100 wpm/ 1 error	97 wpm/ 1 error	-3 wpm/ no change
4	96 wpm/ 1 error	145 wpm/ 3 errors	+49 wpm/ +2 errors	4	100 wpm/ 3 errors	99 wpm/ 2 errors	-1 wpm/ -1 errors
5	59 wpm/ 1 error	105 wpm/ 6 errors	+46 wpm/ +5 errors				
Average	87 wpm/ 1 error	118 wpm/ 3 errors	+31 wpm/ +2 errors	Average	86 wpm/ 2 errors	89 wpm/ 3 errors	+3 wpm/ +1 errors

In *Table 3*, the data shows that the average words correct per minute increased for both intervention programs. The Six-Minute Solution showed an average increase of three words per minute. Whereas, the Read Naturally intervention showed a greater increase of thirty-one words correct per minute.

Graph 3: Universal Screening Pretest and Posttest Average Results

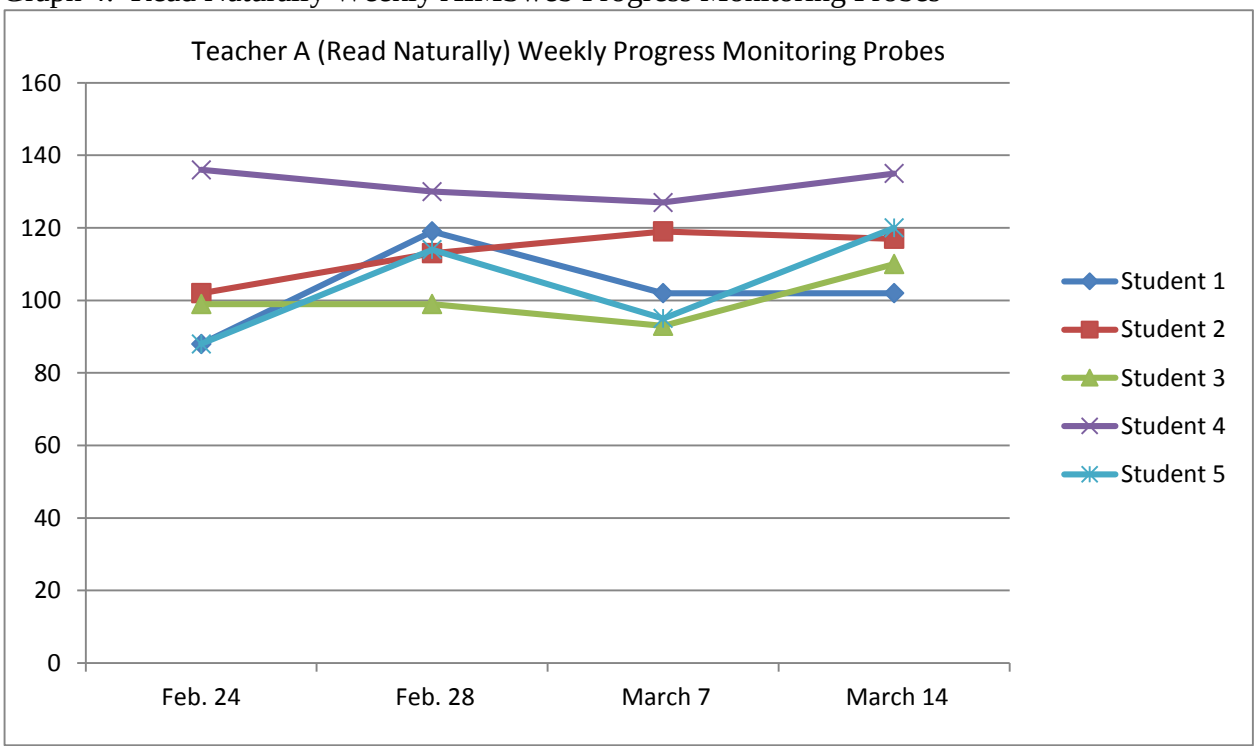


Overall comparative results of pre-test scores for Read Naturally and The Six-Minute Solution show similar baseline averages (see Graph 3). Posttest results show both interventions provided fluency growth at the end of the four weeks. However; the greatest increase of fluency resided with the Read Naturally participants.

Table 4: Read Naturally Weekly AIMSweb Progress Monitoring Probes

Read Naturally						
Date	Passage	Student 1 (WPM/Error)	Student 2 (WPM/Error)	Student 3 (WPM/Error)	Student 4 (WPM/Error)	Student 5 (WPM/Error)
2/24/14	28	88/3	102/3	99/1	136/1	88/3
2/28/14	29	119/3	113/3	99/1	130/6	114/5
3/7/14	30	102/2	119/4	93/4	127/0	95/4
3/14/14	31	102/0	117/1	110/0	135/0	120/4
** WPM/Error = Words Per Minute/# of errors						

Graph 4: Read Naturally Weekly AIMSweb Progress Monitoring Probes

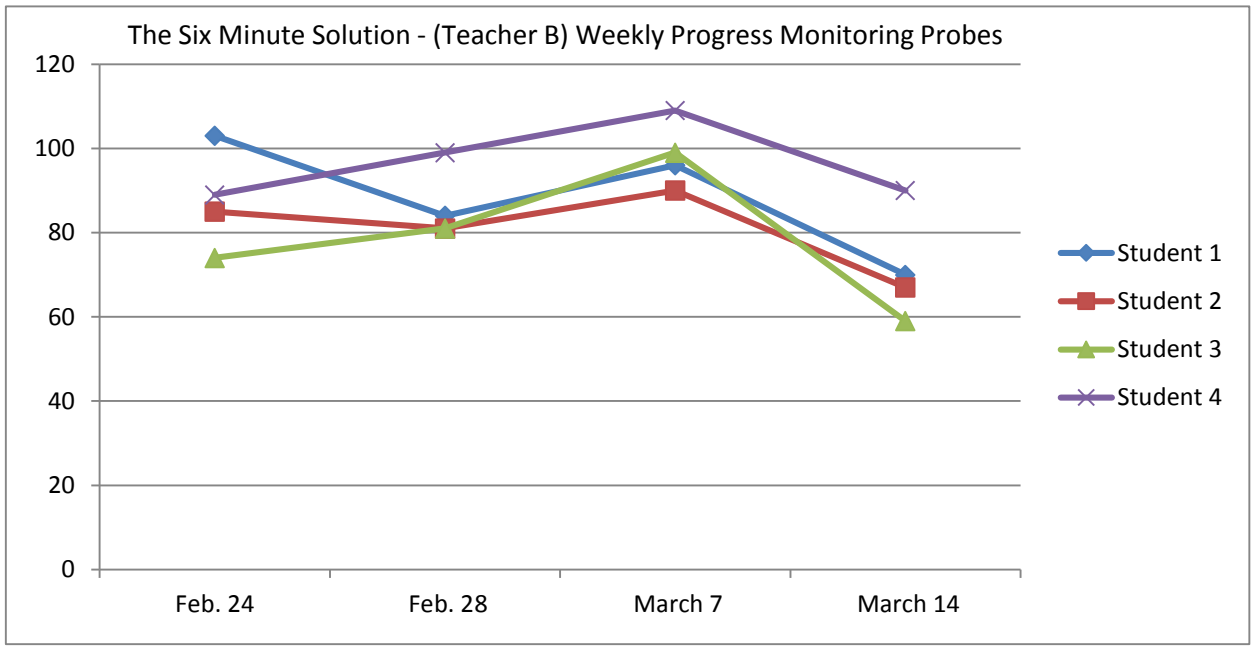


Weekly progress monitoring probes show fluctuation of words correct per minute for the Read Naturally program (see Table 4 and Graph 4). Even with the fluctuation of the monitoring probes, the ending results show an increase in fluency at the end of the four week intervention. Fluctuation between the weekly progress monitoring probes could be reflective of the complexity of the passages, time they were administered, or environmental factors.

Table 5: The Six-Minute Solution Weekly AIMSweb Progress Monitoring Probes

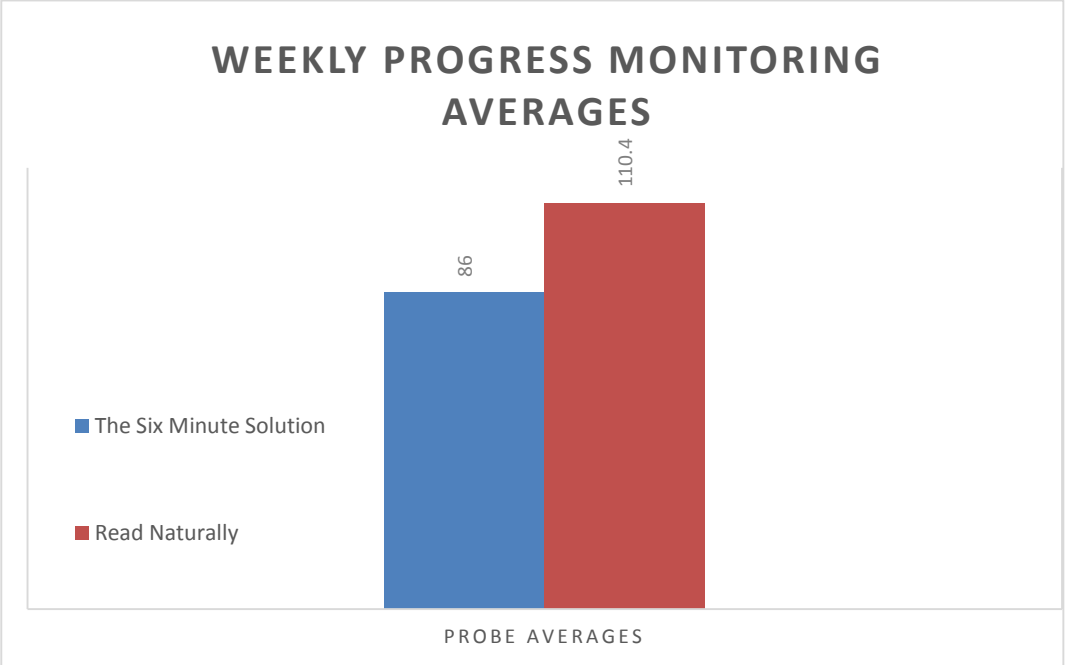
The Six-Minute Solution					
Date	Passage	Student 1 (WPM/Error)	Student 2 (WPM/Error)	Student 3 (WPM/Error)	Student 4 (WPM/Error)
2/24/14	28	103/1	84/5	96/9	70/5
2/28/14	29	85/4	81/4	90/5	67/5
3/7/14	30	74/4	81/8	99/2	59/6
3/14/14	31	89/1	99/0	109/3	90/2
** WPM/Error = Words Per Minute/# of errors					

Graph 5: The Six-Minute Solution Weekly AIMSweb Progress Monitoring Probes
Weekly progress monitoring probes show fluctuation of words correct per minute for the The



Six-Minute Solution program. The fluctuation of the monitoring probes and the ending results show an overall decrease in fluency at the end of the four week intervention (See Table 5 and Graph 5). Fluctuation between the weekly progress monitoring probes could be reflective of the complexity of the passages, time they were administered, or environmental factors.

Graph 6: Weekly AIMSweb Progress Monitoring Probes Averages



Averages of the weekly progress monitoring probes for both interventions show a greater growth of fluency over a four week period by a difference of 24.4 words correct per minute (see Graph 6).

Table 7: Comparative Results for Pre-Test and Post-Test

	Mean	SD	SEM	N	T value	Df	P Value	Intervention Difference
Pre Test								
Read Naturally	86.60	15.60	6.98	5	0.8507	7	0.4231 (>.05)	86.60 – 76.00 = 10.60
The Six-Minute Solution	76.00	21.92	10.96	4				
Post Test								
Read Naturally	118.40	16.06	7.18	5	2.9384	7	0.0218* (<.05) Significant Difference	118.40 – 89.00 = 29.40
The Six-Minute Solution	89.00	13.24	6.62	4				

When a T test was performed using the AIMSweb Universal screening pretest data, the mean of the Read Naturally intervention was 86.60, and The Six-Minute Solution mean was 76.00, with a difference of 10.60. The standard deviation for Read Naturally was 15.60 and The Six-Minute Solution program standard deviation was 21.92, with a difference of 6.32. The t-value of the two intervention programs is 0.8507. The P Value of the paired t test was 0.4321 (> 0.5), which does not show a significant difference between the two intervention programs. These comparative results show that the sampling groups were comparable before beginning the intervention programs.

When a T test was performed using the AIMSweb Universal screening posttest data, the mean of the Read Naturally intervention was 118.40, and The Six-Minute Solution mean was 89.00, with a difference of 29.40. The standard deviation for Read Naturally was 16.06 and The Six-Minute Solution program standard deviation was 13.24, with a difference of 2.82. The t-value of the two intervention programs is 2.9384. The P Value of the paired t test was 0.0218 (< 0.5), which shows a significant difference between the two intervention programs. Participants in Read Naturally had significantly higher fluency growth (Average growth: 118.40-86.60=21.80) than those in The Six-Minute Solution (Average growth: 89.00-76.00=23) during the four week research study, although participants in both programs showed positive growth in fluency. Further, the effect size on posttest score comparison was computed. The effect size is 0.743, which shows the Read Naturally program had significantly more positive effect on student fluency. Therefore, the research hypothesis, that there is significant difference between the two fluency programs, Read Naturally and Six-Minute Solution in the effect on reading fluency of struggling 3rd graders, is supported. The Read Naturally intervention program had a more positive effect.

Discussion and Conclusion

This research study was conducted to determine which research-based intervention program, Read Naturally or The Six-Minute Solution, had a greater effect on fluency with 3rd grade students at an elementary school. Intervention programs vary from school to school, however; it is a necessary task to determine if particular programs that schools invest in, truly provide a positive growth of fluency for the students using them. Both of these programs are researched based and use the main strategy of repeated reading which studies have shown have a positive effect on increasing reading fluency.

A study conducted by W. J. Therrian, showed that repeated reading has a positive effect in improving reading fluency in both students with and without learning disabilities. Therrian used participants ranging from ages 5 to 18 years and utilized 18 different studies to support his findings. It compared non-transfer (i.e. ability to fluently read or comprehend the same passage after reading it multiple times) and transfer (i.e. ability to fluently read or comprehend a different passages several times) in which both showed positive effects of repeated reading (Therrien, 2004).

This study was conducted to determine if there were effects from the intervention programs, which program had a more positive effect on fluency. The study found that Read Naturally intervention had a greater effect on increasing reading fluency in third grade readers. However; both intervention programs did show fluency growth even within the short four week

timeframe. Data analysis results demonstrated that at the end of four weeks, participants in the Read Naturally program had a more significant increase in words correct per minute than The Six-Minute Solution. The participants sampled in the study began on a similar level, which further support that the Read Naturally program, even with limitations noted, had more significant growth of fluency over the intervention, The Six-Minute Solution.
Results from the comparison of the weekly progress monitoring results show that fluency averages fluctuated from week to week for both programs, but still showed greater weekly gains for Read Naturally. The average of the four week monitoring showed a significant increase for Read Naturally of 24.4 words correct per minute (see Graph 6).

The results from the pre and posttest data also show that the Read Naturally program provides the greatest fluency gains per participant and on average. The Six-Minute Solution showed an average increase of three words per minute. Whereas, the Read Naturally intervention showed a greater increase of thirty-one words correct per minute. This is a significant difference of twenty-eight words. A study done by Hasbrouck and Tindal noted, "WCPM has been shown, in both theoretical and empirical research, to serve as an accurate and powerful indicator of overall reading competence, especially in its strong correlation with comprehension. The validity and reliability of these two measures have been well established in a body of research extending over the past 25 years." (Hasbrouck & Tindal, 2006, p. 636).

The Six Minute Fluency was paper based and more student driven, whereas; Read Naturally was computer based and required more teacher involvement during its use. While both maintain use of repeated reading, the methods used to utilize this strategy could have produced the greater increase with Read Naturally.

The hypothesis for this study is supported because the reading intervention programs Read Naturally and The Six-Minute Solution have different effects on reading fluency achievement. It was proven that the intervention program, Read Naturally, showed a consistent higher average of progress monitoring probes throughout the study, ending with a significant overall increase over The Six-Minute Solution at the end of the study.

The results show that both programs were beneficial to the students for increasing reading fluency and either program can help to deter future learning disabilities in reading. Students who show signs of early fluency struggles, are believed to be potential candidates of learning disabilities. Without proper intervention, it can severely and negatively impact a student's future, both academically and beyond. Cevriye ERGÜL analyzed struggling third grade readers fluency and accuracy to determine if they were at risk of learning disabilities which ultimately affected their reading success rate throughout their educational years. ERGÜL notes that "longitudinal studies have shown that reading problems of students with reading difficulties continue through the school years…88% of student who are poor readers at the end of first grade remain poor readers in fourth grade." (Dickenson & McCabe, 2001, p. 2051).

Additional research would need to be conducted to determine if these researched based instructional strategies would have different outcomes if used over an extended period of time and utilizing a larger sampling of participants. Studies have shown that reading fluency is the "the ability to read rapidly with ease and accuracy, and to read with appropriate expression and phrasing. It involves a long incremental process and text comprehension is the expected outcome" (Grabe, 2010, p. 72). Due to the diverse and cultural needs varying from school to school, additional data from a larger sampling can provide more accurate and valid results.

Teachers would also need to be well trained in and have the dedicated time for full implementation of each. Studies by Swain, Leader-Jansen and Conley indicated that for any intervention to have continued success, instruction must be continual in order for fluency to be maintained and increased over long periods of time. (Swain, Leader-Janssen, Conley 2013).

Implications for Intervention Programs

Classroom implications of this research are easily integrated into the curriculum. Implementation of both programs are easily accomplished with participants being easily instructed on use and can quickly acclimate themselves. Both interventions can effortlessly become a part of the daily reading routine, with The Six-Minute Solution being utilized in a paired reading, while Read Naturally a more independent task. Both programs require a high level of independence, however; teacher interaction is required slightly more for Read Naturally. The higher need for teacher interaction in Read Naturally is for pre and posttest assessment and progress checks during the reading to verify that words correct per minute are being met to advance in the program. The Six-Minute Solution required teacher presence mainly for pretest and posttest and initial review of unknown words. There is also minimal preparation, once the program is set up and established. Since both programs focus on repetition, there is nothing new to teach as it is the same process, only new stories that are used. Other than the software installed, no additional supplies are need for Read Naturally. The Six-Minute Solution would require printed stories, fluency graph, folders organize for each participating student, and red/blue crayons or pencils.

Limitations of the Study

The limitations of this study include: absences, inclement weather days, using existing participants in class, small sample size, classroom environment differences, students exposure to different teaching styles, students learning style, variations in how reading standards are taught, home-instruction, different teacher within each class, participants that receive additional support through reading IEP, and the teacher is acting as the researcher. Attrition also occurred during the four week study which further skewed results against an already small sampling. The four week length of time allocated for this study could have also impacted final data results. The different methods of each of the interventions could have had the greatest impact on the outcome of the data. The Six Minute Fluency was paper based and more student-driven, whereas; Read Naturally was computer based and required more teacher involvement during its use. This could have been further skewed by the use of headphones for Read Naturally which can help reduce distractions. One final limitation is that the Read Naturally program was more individual based with teacher support, whereas The Six-Minute Solution was more student directed with less teacher interaction. These are factors may have impacted the outcome.

With parental permission, all participants were willing to take part in the study being conducted. Both programs were directed within the classroom without any issues and within the amount of time specified.

While keeping limitations in mind, further research would be needed to create a more valid comparison and extend to other elementary school settings. Following the same protocol for the programs would be simulated only participant selection would not be isolated to a

specific classroom rather expanded from other classrooms from same grade level. The length of the study would be extended to accommodate for some of the limitations mentioned.

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Appendix I: Sample Lesson Plan

Preparation

Before starting the first lesson, students will need to be enrolled in the Read Naturally program with a unique user id and password. A fluency goal will need to be entered for each of the participants. A sample story will need to be set up and teacher will model process to the students participating in the study. The daily lesson is repetitive, so modeling and guidance will be used as needed. The process will be as follows, however; students will pick up where they left off each day.

Materials

A computer with internet connection, display screen, and headphones are required.

Daily Procedure

Students log into the program using their unique user id and password. Once in, they wil select a story of their choice. Remind students to use their text feature strategies and to reference the "key words" on the screen for definitions prior to cold read.

Students will then do a cold read with the teacher. This step requires the teacher to enter in their user name and id to continue on the students screen. The software will time the students as they read the story. Teacher will keep track of the number of errors as the students read aloud and then enter into the program once completed.

Students will then do a read along practice their story following along as sentences will be highlighted as it is read to them. Remind students that the goal is to have them read their

story with expression, while making three or fewer errors. Words which students have difficulty with during reading can be clicked on to identify for additional practice.

Students will then complete the practice step of reading the story independently several times before reaching their pre-set goals. Students are able to see their goal at anytime and that they should be clicking on any word that is difficult. In the practice phase, student are able to start timing when they are ready to begin practicing. They will continue to practice until they reach their goal and have read the required amount of times.

When students are ready, a hot read will be conducted with the teacher. This step requires the teacher to enter in their user name and id to continue on the students screen. The software will time the students as they read the story. Teacher will keep track of the number of errors as the students read aloud and then enter into the program once completed. If the student passes, the student can view their hot-timing graph, and students should be praised on achieving their goal. If the student does not pass, they will be required to go back and complete steps three, four, and five again. Student who have passed can select a new story and begin steps one through five again.