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## **Impact of Student-Tracked Reading Fluency**

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Impact of Student-Tracked Reading Fluency

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Northwestern College

An Action Research Project Presented  
in Partial Fulfillment of the Requirements  
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Dr. Kenneth Hayes

**Abstract**

This action research project was driven by the researcher's interest on the impact that student-tracked reading fluency has on fluency growth. The researcher implemented a repeated reading fluency intervention with a group of eight first grade students from her classroom. Four of the eight students tracked their reading fluency scores on a graph while the other four students, in the control group, did not record their data. Throughout the study, the eight would individually work with the instructor during their repeated reading. The same repeated reading passage was used with all eight students. The findings from this action research project report that each student showed progress throughout the course of the three-week intervention. Students in the treatment group who graphed their data did show more growth in their correct words read per minute compared to the control group. However, it was not a significant enough difference to conclude student-tracked reading fluency is more effective than data that is not tracked. Results do indicate that repeated reading positively impacts fluency scores.

*Keywords: repeated reading, fluency, student-tracked data, assessment*

## Table of Contents

Impact of Student-Tracked Reading Fluency .....	4
Introduction .....	4
Review of the Literature .....	6
What is Fluency?.....	6
Fluency Interventions .....	8
Repeated Reading.....	11
Assessment and Data.....	12
Methodology .....	14
Research Question.....	14
Participants .....	14
Timeline .....	15
Variables.....	16
Measures.....	16
Intervention and Setting .....	17
Statistical Analysis .....	18
IRB .....	18
Data Collection .....	18
Findings.....	20
Data Analysis .....	20
Figure 1 .....	21
Discussion.....	23
Summary of Major Findings .....	23
Limitations of the Study .....	24
Further Study.....	24
Conclusion .....	25
References.....	27

## **Impact of Student-Tracked Reading Fluency**

### **Introduction**

As students acquire foundational reading skills, the emphasis turns to attaining a reading fluency level that will help them progress into strong readers. Reading fluency is a main underlying factor that defines characteristics of good readers (Yildirim & Rasinski 2014). Teachers introduce and teach several research-based reading fluency strategies to support effective reading fluency outcomes. The problem is not all students are able to meet the oral reading fluency benchmark determined for their grade level. Low reading fluency is a concern across the nation.

According to the Nation's Report Card from 2019, only 35% of the fourth-grade students in Iowa were at or above the national benchmark for reading fluency (Deeter, 2019). This statistic shows the majority of students are not meeting desired outcomes. It is necessary that educators adjust the way they are teaching reading fluency. When students start to fall behind in reading fluency they often struggle to catch up, resulting in academic difficulties in years to come. First grade is a monumental year for reading. Students learn to use their foundational skills of phonemic awareness, phonics, sight words, prosody, etc. to start learning how to read fluently. The research question that will be explored during this action research project is: How will first grade struggling readers be impacted by tracking their own reading fluency data?

The purpose of this action research project is to determine the effectiveness of students tracking their own reading fluency data. Repeated reading will be used throughout the week to ensure students are gaining adequate access to reading materials. The goal of this action research plan is to find out if student-tracked data will result in more fluent readers, which will later result in more students meeting grade level benchmarks. This formative assessment will help improve

reading fluency outcomes by making students, and teachers, aware of where they are currently at and what they need to do to get to the desired outcome.

Elementary teachers educate their students in reading on a daily basis. This can be done in whole group, small group, and in one-on-one settings. This literature review will look at instructional reading strategies that are being used to promote increased reading fluency amongst students of all ages, with an emphasis on elementary students. The information found in the literature review section comes from peer-reviewed articles retrieved from the DeWitt Library at Northwestern College. The articles were further minimized by selecting articles that had publication dates within the last ten years in order to get the relevant information.

Repeated reading will be used in the action research plan. This intervention shows significant reading fluency growth amongst students of all ages. Researchers worked with middle school students, and they highlighted one middle school student. He underwent seven sessions of a repeated reading intervention increased his 41 words per minute (wpm) to 64 wpm (Guerin & Murphy, 2015). Some of the topics that will be discussed in the literature review include: reading fluency, fluency interventions, repeated reading, and fluency assessment and data. These topics are linked to the outcomes resulting in increased reading fluency. First grade students will be participating in repeated reading throughout this research project. Half of the students will track their fluency data while the other half will not. Students participating in this action research project will be students that have not yet the first-grade reading benchmark of 67 words per minute.

## Review of the Literature

### What is Fluency?

Fluency is an integral component of the reading process. Reading fluency refers to how fast and accurately a person can read a passage with appropriate expression. According to Yildirim & Rasinski (2014), “Reading fluency is one of the underlying factors of successful language curricula and it is also one of the defining characteristics of good readers” (p. 97). In fact, fluency is often tracked closely in early elementary to ensure students are on track for becoming successful readers. It is stated in the article, *Word Reading Fluency Level and Gains*, “Word reading is often the target of screening in early grades because of the robust relation between word reading and comprehension” (Smith et. al., p. 31). Word reading fluency is used as a screening tool starting in first grade. At this point in their learning, students start to combine the knowledge they have learned from sight words, phonemic awareness, and decoding so they are able to read sentences.

Fluency is a foundational skill because once students have learned to read, the shift happens where they are now reading to learn. An article written by Steinle et. al., (2021) reports, “Fluency instruction is typically provided in the elementary grades because literacy instruction aims to develop students’ basic word reading skills and automatic word recognition to support reading comprehension. Literacy instruction in the secondary grades increasingly focuses on reading comprehension and content acquisition” (p. 1). Emergent readers need to master fluency so they are able to draw meaningful connections from the text and understand what they are reading. Researchers, Yildirim & Rasinski, (2014), state a similar belief, “Fluent readers are effortless or automatic in their recognition of words in print, thus freeing cognitive capacity for the more important task in reading – comprehension (p. 98).

*Why is Fluency Important?*

Around age ten students begin to read text for understanding. Researchers Steinle et. al., (2021), state that the caveat for this is, “reading fluency may still be an important and necessary component of reading instruction for older struggling readers as these students continue to struggle with fluent and accurate word reading” (p. 2). The ability to read accurately and with an appropriate expression does not go away after the younger elementary grades. It continues to follow students as they progress throughout school. This highlights the importance of teaching students how to decode and read sight words early on in their education.

When secondary students are unable to read fluently, their work becomes significantly more strenuous as they are having to spend a longer amount of time trying to understand the text that has been provided. “Inadequate reading fluency has implications for older struggling readers who are expected to learn grade-level content by reading text” (Steinle et. al., 2021, p. 2). The inability to read fluently affects prosody. Prosody has been described by 77 teachers in the northeastern United States as reading with “expression, voice, tone, attending to punctuation, phrasing, smoothness, fluidity, intonation, and flow” (Deeny & Shim, 2016, p. 113). Out of these 77 teachers in the United States, 83% “discussed fluency as vital to comprehension” (p.113). This result is significant considering that these teachers were spread across two districts in northeastern United States and six different grade levels.

There are several factors that have been considered as important in order to become a proficient reader. Some of these skills include “phonemic awareness, phonics, reading fluency, vocabulary, and reading comprehension” (Yildirim, & Rasinski, 2014, p. 97). The ultimate goal of reading is to be able to comprehend the text. A study was conducted in Turkey’s Kirsehir province in the spring of 2012. During this study, researchers found that “all measures of word



recognition and fluency correlated individually, significantly, and substantially with reading comprehension” (p. 99). This research also revealed that the ability to read fluently is important in English as well as other languages, like Turkish.

### **Fluency Interventions**

Fluency interventions are an integral part in helping struggling readers gain more reading skills. Child centered reading strategies should be the main focus of instruction for students with a low reading achievement. These strategies include talking, reading, dictating, and writing (Bastug & Demirtas, 2016). The combination of these four skills help students make connections across circular areas and allows for multiple methods to practice the skill(s) at hand. Bastug and Demirtas also report that images and speaking support reading fluency (2016).

Fluency interventions are necessary to use when there is a lack of accuracy and lack of automaticity when reading (Murray et al., 2012). Some common fluency interventions used with lower elementary students are a focus on letter-sound correspondence, word recognition, and decoding (Murray et al., 2012). The combination of these skills results in a higher reading fluency for students. Students also need someone to model reading fluency to them so they know what the goal is (Rasinski et al., 2022).

Another researcher has discovered that reading volume affects reading fluency and achievement. Researcher Allington researched many previous studies surrounding the idea that volume of text a student is exposed to affects fluency in a positive manner. His research found that more exposure to text allows for students to recognize many words with little conscious effort (Allington, 2014). This is an essential finding because sight words are a main focus of learning how to read. First grade students spend a large amount of time working on memorizing sight words to help improve their fluency. Sight words are words that do not follow phonics

skills. They are words the reader must be able to recognize and memorize; sight words are not words that can be sounded out. The best way to help students gain reading fluency and accuracy is to recenter the focus to reading during reading time rather than spending the majority of time having students complete worksheets (Allington, 2014).

Fluency interventions need to occur on a regular basis in order to best serve students' needs. Creating a non-interruptive classroom reading environment can help foster students' reading abilities (Allington, 2014). In other words, the less distractions, the better. This allows for students to give their full attention to the reading intervention. Researcher Shimono performed a study on fluency progression using timed reading and repeated reading interventions. His students spent about 300 minutes in the reading intervention process. Shimono discovered that the knowledge of phonological, orthographic, and semantic components are essential to the reading process (2018). This is an important discovery because foundational skills of reading are essential for building fluency. Students need to be able to decode words and read them accurately within different settings and sentences. First grade students spend about 20 minutes of whole group reading time working on building phonemic awareness and reading sight words. Students also need access to several books in the classroom in order to build these skills during read to self time (Allington, 2014).

Three researchers by the names of Begeny, Yeager, and Martinez studied the outcomes of individual reading fluency interventions in comparison to small group reading fluency interventions. Their results showed that nearly all students benefited from one or both reading intervention groups that they were placed in (2012). There was little to no difference between the outcomes of their small group vs. individual interventions. The only student that did not show growth in their reading fluency was a student that struggled with attention difficulties. This study

was also done with Spanish-speaking students. This study is important to note with the effectiveness of reading interventions because it shows how it works across different languages.

When interventions are given with fidelity, students will reap the benefits (Begeny et al., 2012). This is practical research because students who are learning different languages, whether it is their native language or a second language, will benefit from reading interventions. It is also encouraging to hear students can make just as much reading progress in a small group as they can in a one-on-one setting. It is unrealistic to expect a general education teacher to meet with twenty students individually throughout a school day. This would not leave time for much of anything else. Researchers Deeney and Shim believe there is a need for professional development centered around progress monitoring and grouping students (2022). Students need to be grouped based on the data that has been collected from progress monitoring. Students in a small group should all be working on the same goal.

Reading interventions are successful with small groups when the groups put together with intentionality so that students who need to receive the same intervention(s) are placed together. Students need targeted assessments and interventions that address the underlying reading difficulties (Murray et al., 2012). Fluency interventions need to occur on a consistent basis for struggling readers, so they can get repetitive practice on the skills they are lacking. The educator giving the fluency intervention needs to focus on student grouping, text difficulty and length, intervention setting, as well as the duration of the intervention (Zimmermann et al., 2021). Defining a clear learning target for the fluency intervention will allow for the educator and students to know the desired outcome and work towards that goal. It will give a purpose to the work being done.

## **Repeated Reading**

Repeated reading is described as an evidence-based practice (Ardoin et al., 2013). Repeated reading occurs when the same text is read multiple times. Repeated reading is also closely associated with reading fluency. As stated by researchers Steinle, Stevens, and Vaughn, fluent readers need to be able to read with appropriate expression, speed, and accuracy (2022). The act of rereading a passage allows for students to increase their ability to do all three of the previously mentioned characteristics. When students engage in repeated reading, additional readings of the passage decrease in time significantly (Foster et al., 2013).

Additional results from repeated reading research regarding points to the fact that students devote less time to individual words (Foster et al., 2013). In other words, students can gain familiarity with sight words as well as decodable words. Since they are engaging in the same text multiple times, the student will start to gain more confidence and consistency with reading words accurately. Instructors can start to focus on helping students with word accuracy, reading rate, and expressiveness (Bolaños et al., 2013). If an error does occur, the instructor needs to give immediate error correction. Error correction needs to be used with repeated reading in order to eliminate the likelihood of the same reading errors occurring in the future (Steinle et al., 2022).

The repeated reading intervention not only results in increased oral reading fluency, but it also increases students' oral and silent reading comprehension (Guerin & Murphy, 2015). As students progress throughout education, they go from learning how to read to reading to learn. This progression is important to acknowledge when using repeated reading because the instructor should be aware that repeated reading serves a dual purpose. Repeated reading increases both fluency and comprehension in students. This sets them up for success as they grow older.

Researchers Powell and Gadke identified that additional data should be collected on the specific immediate effects fluency-based interventions have on students' reading abilities (2018). This will be addressed in this action research study. Another area of further research that was identified includes have access to the names of the passages that are used in an intervention (Zimmerman et al., 2021). Zimmerman and his team did not have access in their research to what texts were used with the students. This is applicable to the repeated reading intervention because students need to be reading passages that are appropriate to their skill level. Therefore, researchers and instructors need to hand pick texts that align with each student's skill level. As students gain more fluency skills, their passages will gradually grow more challenging.

### **Assessment and Data**

In order to best serve students' needs, frequent assessments should be given to track growth. These assessments allow for the teacher to meet each student's needs due to the data that has been collected. Similarly, in order to have reliable results in a research project like this one, clear data needs to be collected. It is important to align the assessment with the skill at hand so that it is accurate. Some educators will involve their students in the data collection and data review process. More research is needed to fully understand the effects of student involvement in the data-use practice (Marsh et al., 2022). Researchers are interested in discovering if students who are involved in the data review will see more positive effects in their learning.

Classrooms that have a focus on student goal setting should benefit from student involved data meetings (Marsh et al., 2022). Similarly, Von Frank believes that teachers need to be involved in constant communication with each other as well as their students regarding their learning progress (2022). This allows for targeted interventions to take place and gives students a meaning for what they are learning. The information that comes from the collected data is what

drives student success and helps students attain their goals (Von Frank, 2022). Students need to be aware of where they are at currently and what the intended outcome is. The goal gives them something to work toward and gives them a purpose.

Researchers Tindal et al., discovered the majority of students taking alternative assessments that were involved in the data process remained at the same proficiency level (2022). They also concluded that other factors such as sex, ethnicity, and disability were not significant predictors of the outcomes. This is important to realize that students in this group faced learning difficulties. The researchers believed that more research needs to be done in a variety of grade levels, states, and school districts in order to get more reliable and consistent results (Tindal et al., 2022).

One way to track student involved data use (SIDU) is by having a separate data folder for each student (Jimerson & Reames, 2015). SIDU needs to be used consistently and constructively with students in order to engage students in their learning. “Students work with teachers to analyze their data, establish personal learning goals, and determine effective learning strategies” (Jimerson & Reames, 2015, p. 283). This type of data directly incorporates the teacher with the student in the data analysis process. SIDU causes students to reflect on their own learning habits, including areas of strengths and areas of weaknesses. Students develop lifelong skills with SIDU including developing goals and reading data. Researchers Jimerson & Reames conclude that further research needs to be done to find the most effective way to fully engage students in the SIDU process (2022).

## Methodology

### Research Question

How will reading fluency be impacted by student-tracked data in comparison to fluency data that is not student-tracked?

### Participants

The action research study was conducted in a first-grade classroom in Newton, IA. 8 of the 16 students in the first-grade classroom participated in repeated reading. These eight students had not yet met the first-grade goal of reading 67 words per minute during the Winter FAST testing on a grade level passage. They are also found in the bottom 50% of the first-grade class in regards to their literacy status and reading fluency. Four of the eight participants are considered persistently at risk in their literacy skills. This means they have consecutively fallen below the composite benchmark two or more times. In addition, two other students are considered at risk because their composite score fell below the benchmark level for the first time. The final two students were not considered persistently at risk nor at risk in the Winter. However, since their words per minute(wpm) fell below the end of year benchmark, the researched included them in the study.

The student's reading fluency ranged from 13wpm to 64 wpm during the Winter testing period. This data comes from the Fastbridge assessments. At the beginning of this study, each student read another Fastbridge grade-level passage so the researcher could collect baseline scores that were up to date. After the new baseline data was collected, students' reading fluency ranged from 7wpm to 82 wpm. Even though two of the students tested above the first grade benchmark, they were left in the study due to their inconsistency with reading fluency as well being in the lower half of the reading achievement.

One of the students in the study is currently being evaluated to see if he qualifies for special education services in reading due to his lack of growth. The achievement gap between him and his peers continues to grow. Five of the eight students receive a daily 30-minute small group reading intervention with our reading teachers. In addition, one of the students receives an additional 20-minute one-on-one reading intervention with a reading corporation coach. The other three students are not currently receiving additional reading services outside of the general education classroom. Two students also receive special education services in the realm of speech.

All 8 participants are Caucasian. These students participate in a 15-minute reading small group with the researcher as part of the daily reading rotations. While students are not in small group, they are participating in read to self, word work, and a writing station. Students are also pulled during this time for their 30-minute intervention with a reading teacher. In addition, the entire class receives 45-minutes of whole group reading instruction. Participants read to the researcher one-on-one during their one minute timed reading.

### **Timeline**

This three-week intervention occurred during the last two weeks of February and ended the first week of March. The intervention is 14 days instead of 15 due to a no school day in the three-week period. Students will start with a baseline score on day one. Days 2 through 5 will be spent reading the passage “Tad.” During days 6-9 , students will read “Ken, Matt, Ran, and Kim” each day. The last repeated reading passage students will read is “Duke and Kev.” This will be read on days 10-13. The final day of the intervention will take place on day 14 where the baseline score will then be compared to the ending score. The baseline and final reading are from



the passage “Hank and Stan.” All of these passages can be found on the Fastbridge website for first grade students.

### **Variables**

The goal of this research study is to see the impacts student-tracked reading fluency data has on the correct words per minute outcome. The control group consisted of 4 students that read the text and were verbally told their wpm when they were done reading. The treatment group consisted of 4 students as well. These students were told their reading scores when they were done reading and they also graphed their wpm on a chart. This graph showed the child’s previous scores so the participant could compare the total number or words read from day to day.

The independent variable was the use of repeated reading and graphs. The treatment group graphed their wpm after each one minute timed reading. The dependent variable in this research was the student’s correct words read per minute.

### **Measures**

The fluency intervention used by the researcher is called Repeated Reading. Repeated reading occurs when students read the same passage multiple times. The intention is to build oral reading fluency as students gain familiarity with the passage. The passages used during this action research study were from FastBridge. The state of Iowa measures students’ fluency in the fall, winter, and spring. The end of year benchmark for first grade students is 67wpm. The series of tests allow for educators and interventionalists to keep track of student growth and where students are at in comparison to peers as well as the pre-determined state-wide benchmarks.

Students who do not meet benchmark during the fall, winter, and/or spring are progress monitored weekly. This allows for educators to monitor areas of growth as well as areas of

struggles in order to best fit the needs of students' literacy skills. Schools look at how many students are meeting benchmark versus the number of students who have not yet met benchmark. From there, they determine appropriate interventions to put into place in hopes of helping students meet benchmark by the next testing session. Composite scores in first grade consist of sight words, nonsense words, CBM-r, and word segmentation. Nonsense words are weighted the heaviest since it tests letter sounds. This action research study focused in on students' CBM-r scores to retrieve the data with their correct words read per minute.

“Hank and Stan,” a Fastbridge CBM-r fluency passage, was used to monitor participants' baseline and ending data points. The researcher read the word to a student after three seconds of no response or incorrectly reading the same word repeatedly. Mistakes that are subtracted from the wpm score include omissions, substitutions, and mispronunciations. The final words read per minute was reported by subtracting the number of mistakes from the total number of words read during the one-minute timed session.

### **Intervention and Setting**

The Repeated Reading intervention was given to students during morning independent work time. All of the repeated reading passages came from the Fastbridge website. This ensured that they were appropriate for first grade students. One student read to the researcher at a time while the rest of the class worked at their desks on the given assignment. The other participants were not in ear shot. When students were at the researcher's table, they were told to read with their best effort. The researcher made sure the student was ready to read before starting the timer.

The student needed to have a finger on the first word of the passage for the timer to begin. The student was then given 1 minute to read as many words as possible. This reinforces

the idea of tracking while reading. When the timer ended, the researcher reported the words read per minute to the student.

### **Statistical Analysis**

If the student was in the treatment group, then the results were graphed. This allowed for a visual representation of the words read. Students in the control group were verbally told their score and did not record it on a graph. Graphing is a new concept in first grade. To ensure that students were graphing the correct score, the researcher would mark the point on the graph to which the student needed to color to. Participants in the treatment group were able to view their graphs each day and look at previous days' data. The researcher kept a copy of all of the data points on their computer in google sheets.

After the final fluency scores were collected, the researcher performed tests to compare the growth amongst the control group vs. the treatment group that graphed their data throughout the intervention. The four-way factorial design test was used to evaluate the data. All students were present all 14 days of data collection resulting in more validity with the results.

### **IRB**

This action research study was exempt from the Institutional Review Board (IRB) process because it did not hinder students' ability to learn or alter their learning experience in any negative aspects.

### **Data Collection**

For this action research project, the data collected was quantitative. The data collected in this research includes baseline fluency scores, ending fluency scores, and students' growth of words per minute from the beginning to the end. The students that were chosen for this study are

students that did not meet the end of the year benchmark for fluency during the Winter Fastbridge assessment. There are sixteen students on the roster. Of these students, eight did not meet the goal of reading 67 words per minute (wpm) in January.

The baseline fluency score as well as the ending fluency score were taken from the same passage. The first grade reading passage used derives from Fastbridge; the text is called “Hank’s Prank.” Each of the eight students that participated in this study read to the researcher individually. The study started by collecting a baseline score. Students were told to give their best effort. The researcher kept track of any errors that may have occurred during the one minute timed reading. Students in both the control and treatment groups were verbally told their score. Additionally, students in the treatment group graphed their wpm results.

During the intervention, students in both groups participated in repeated reading throughout the week. The researcher had students come over individually to eliminate distractions and eliminate the likelihood of other students hearing the passage before it was their turn to read. Before the student read, the research reminded students to give their best effort and also told the student their goal was to read further than they did the day prior. All students were given the same passage on day 1 to read. Each student continued to read the same passage for a one-minute timed reading to the researcher on days 2, 3, and 4.

At the end of the one-minute timed reading, students were told the number of words they read in comparison to the day before. Students in the treatment group graphed their results and were visually able to compare the numbers. Students in the control group did not have a written record of their scores from previous timed passages during this study. Only the researcher had access to this. At the end of the four-day repeated reading intervention, students started the process over with a new passage for the next 4 instructional days. This process was completed a

total of three times. Students ended up with 14 data points, a baseline, ending, and the 12 repeated reading scores from the intervention time.

Some examples of feedback students were given include sounding out words instead of guessing, keeping their eyes on the words instead of looking to the researcher for validation during the timed test, using their finger to track, etc. The researcher kept an eye on the timer during the timed reading. If a student was stuck on the same word for three seconds, the researcher would count the word as a ‘missed word’ and read the student to the student so he/she could move on. Along with this the researcher followed along while each student read, carefully marking any words that were read incorrectly or skipped. Students only received credit for the words read correctly. At the end of the intervention, the researcher used the Fastbridge text “Hank’s Prank” to collect each participant’s ending score. Students in the treatment group graphed their final score and then looked at all their graphs from the 14 data points to review their progress. The final fluency score was further used by the researcher to analyze the growth each student had in comparison to their baseline score. The treatment groups’ scores were also compared to the control groups’ scores.

## **Findings**

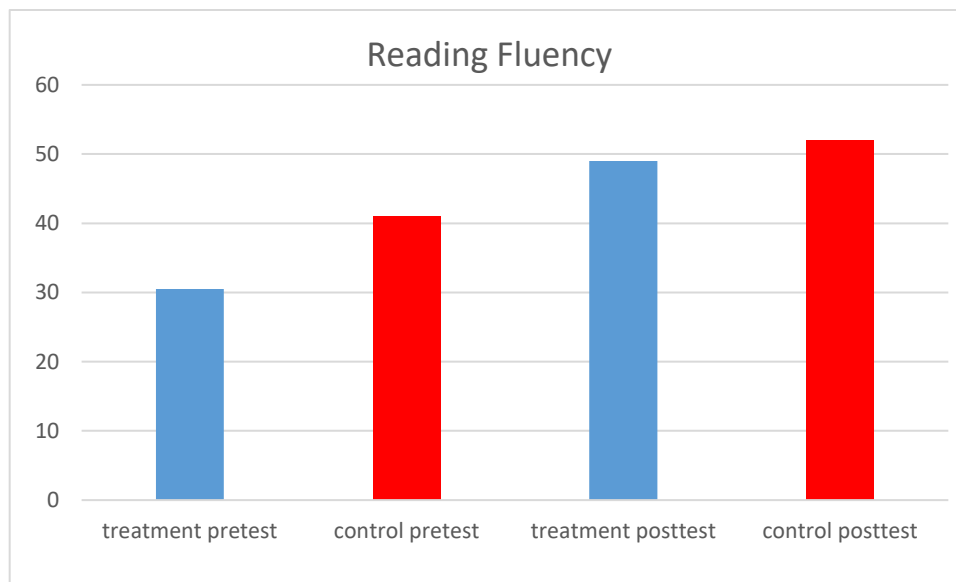
### **Data Analysis**

The eight students in this study were present for all 14 instructional days of the data intervention. Each student experienced growth in their correct words read in a minute throughout this study. The average baseline score for the treatment group, the group graphing their data, was 30.5 wpm. The scores ranged from as little as 7 words per minute all the way up to 73 words per minute. The average baseline score for the control group was 41 words per minute. The control group had a range of baseline data from 14 words per minute to 82 words per minute.

As indicated in figure 1, the mean results from both the treatment and control group's data. The chart lists the baseline scores as "pretest" and ending scores are labeled "posttest." An independent samples t-test was conducted in order to determine if there would be a significant difference in student-tracked reading fluency data in the treatment group compared to students in the control group that did not record their data points.

### Figure 1

*Illustration of the Pretest and Posttest Fluency Scores*



The results calculated after collecting the final data points show that both the treatment group and control group improved their words per minute scores. As a group, the treatment group gained an average of 18.5 wpm resulting in a mean score of 49 wpm. The control group gained an average of 11 wpm resulting in a mean score of 52 wpm. These results show that the treatment group did obtain more growth in their reading fluency.

An independent samples t test compared whether or not the treatment and control group started off at the same level before intervention. Pretest mean scores for students in the control

group ( $M = 41$ ,  $SD = 32.43$ ) and students in the treatment group ( $M=30.5$ ,  $SD = 29.27$ ) showed no significant difference,  $t(8) = -0.4806$ ,  $p=0.6478$ . Since  $p$  is greater than  $.05$ , there was not a statistically significant difference between the treatment's baseline data and the control's baseline data. This means the two groups started off at the same reading level.

The second  $t$  test was used to evaluate the pretest to posttest scores for the control group. Students in the control group showed growth between the pretest ( $M = 41$ ,  $SD = 32.43$ ) and posttest ( $M=52$ ,  $SD=33.79$ ),  $t(4) = -6.5350$ ,  $p = 0.0072$ . The  $p$  value was less than  $.05$ . Therefore, the control group's data is statistically significant and shows that the control group did improve.

The third  $t$  test was used to evaluate pretest and posttest scores for the treatment group. Students in the treatment group showed growth between the pretest ( $M=30.5$ ,  $SD = 29.27$ ) and the posttest ( $M =49$ ,  $SD = 29.94$ ),  $t(4) = -11.1560$ ,  $p =0.0015$ . The  $p$  value was less than  $.05$  resulting in statistically significant data, meaning the treatment group improved in their reading fluency.

An independent samples  $t$  test was used to evaluate if the intervention of student-tracked data resulted in different posttest mean scores between students in the treatment group and students in the control group. There was not a statistically significant difference between the posttest mean scores of students in the control group ( $M=52$ ,  $SD=33.79$ ) and students in the treatment group ( $M =49$ ,  $SD = 29.94$ ),  $t(8) = 0.1329$ ,  $p = 0.8986$ . The  $p$  is greater than  $.05$ . There is not statistically significant data to prove that the treatment group scored higher than the control group. The data is small enough that it could have happened by chance that both groups improved to nearly the same number of words per minute. Each group responded to the repeated reading intervention by gaining in their reading fluency words per minute. However, the

difference between their final reading scores was not significant enough to say student-tracked data resulted in a better score for reading fluency. Overall, this data reveals that there is not enough data to support the statement that students will gain more words per minute when tracking their fluency data versus not tracking it.

## **Discussion**

### **Summary of Major Findings**

This action study consisted of eight first-grade students participating in a study on the impact of student-tracked fluency data. Four of the students tracked their data while the other four students did not. Therefore, this created a treatment group and a control group. All eight students participated in the repeated reading intervention with fidelity.

Out of the students involved in the study, each one saw an increase in their correct words read per minute. This results in 100% of the participants making growth. The average growth that was made among all students was 15 wpm, with the highest growth being 23 wpm and lowest growth being 9 wpm. The reason for students making significant progress over a short amount of time is that repeated reading is a research-based intervention that is very structured. This added intervention boosts students' self-confidence and gives them exposure to the same text over and over again.

Through one-on-one instruction with the researcher, students were able to receive immediate feedback on their reading fluency score. The researcher would provide immediate corrections to errors that came up. This helps decrease the likelihood of the same error reoccurring. Students that were in the treatment group immediately graphed their results when they were done reading. This allowed for students to see their progress over the previous



sessions. Students in the control group were just told their score orally. The researcher kept track of all the students' data – both in the control group and treatment group.

All students made growth throughout this study. The treatment group's average growth was 18.5 wpm. The control group's average growth was and the 11.5 wpm. The difference in the growth between the treatment and the control group is not statistically different enough to conclude that graphing fluency scores results in more growth. Therefore, repeated reading resulted in all students making progress in their reading fluency. More research will need to be done in order to conclude on whether or not graphing impacts fluency scores.

### **Limitations of the Study**

One of the major limitations of this study was the small group of students that were selected for this study. There were only eight students that participated so it was a small sample. All eight students are from the same town, similar economic status, same school, same classroom, and similar reading difficulties. There were four boys and four girls. There is also not any cultural diversity in this first grade classroom this year, 2021-2022, so all students involved in the study were Caucasian. Another limitation presented in this action research project is the duration of the study. Fourteen school days is not a long time.

### **Further Study**

The next step to take would be to implement this study across other first grade classrooms throughout the building. This would hopefully lead to the implementation of it across the district first grade, and then into other first grades throughout the state and country. Teachers will be presented with the findings from this study to show how repeated reading and students closely monitoring their scores, whether on paper or in their head, leads to a significant increase in their reading fluency. Other teachers that implement this study will need to go through a

training to ensure they are using fidelity with repeated reading strategies. That will help the validity of this research project increase. They will need to be provided with the proper amount of time and materials in order to conduct this study.

Another step to further this study would be to implement this study for the duration of the entire semester, or even across the whole school year. It would be interesting to discover what the results will be when engaging in the repeated reading intervention on a daily basis. The researcher will analyze growth and be able to determine how much of an impact student-tracked data has on reading fluency scores. Closely monitoring scores over the course of a semester, or entire year, will help teachers determine the proper reading interventions for their students. Overall, the repeated reading intervention is a main focus of this study as well as student-tracked data. The teachers will need to ensure to implement this study with fidelity in order to receive the most accurate results.

### **Conclusion**

This literature review and action research project have shown the positive impacts repeated reading has on struggling readers. The daily repetition of reading a grade-leveled text results in growth of words per minute. Students also need to be aware of their fluency scores as they read each passage; this allows for students to be aware of how they are progressing. The repeated reading process involves reading a passage for one minute. The instructor gives immediate corrective feedback in the case of an error. Immediate feedback helps reduce the likelihood of that same error occurring again. Through the careful implementation of repeated reading, struggling students are able to increase their reading fluency rate. Student tracked data, regarding graphing scores, did not overtly impact the outcome. However, this action research

project has shown the importance of students partaking in repeated reading intervention on a daily basis to increase reading fluency.

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