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The Effect of Intervention in Foundational Skills on Accelerating Reading Growth in Third Grade Students

A Project Presented to

The Graduate Faculty of

Minnesota State University Moorhead

By

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ABSTRACT

The purpose of this research was to determine the effectiveness of intervention in foundational skills, usually the focus of intervention in grades kindergarten through second grade, on accelerating growth in reading for third grade students. This study aimed to determine if a systematic and sequential phonics-based intervention would still be a crucial component to below grade level readers beyond the primary grade levels. As part of this research, FastBridge Learning screeners and progress monitoring Curriculum Based Measurement (CBM) tools were utilized, to monitor the ongoing results and progress of participants in this study. The students who were a part of this study were identified as in need of intervention to accelerate their learning to meet grade level expectations, and received the systematic and sequential phonics-based intervention using SIPPS: Systematic Instruction in Phonemic Awareness, Phonics, and sight words, for thirty minutes a day, every day. The research for this study occurred between October 2021 and May 2022. After analyzing the data, it was determined that a systematic and sequential phonics-based intervention was an effective instructional plan for third grade students to close their achievement gap in reading, and bring them closer to meeting grade level standards.

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CHAPTER 1

INTRODUCTION

Introduction

Grade three has often been cited as the year when the ability to read has been linked to success in grades that follow, even as much as linking it to graduation: "A student who can't read on grade level by 3rd grade is four times less likely to graduate by age 19 than a child who does read proficiently by that time. Add poverty to the mix, and a student is 13 times less likely to graduate on time than his or her proficient, wealthier peer" (The Annie E. Casey Foundation, 2010, p. 4). Because of this, the researcher wanted to explore the best way to provide intervention to students who were reading significantly below grade level in the fall of grade three, to accelerate their rate of growth so that they could close the achievement gap and meet grade level expectations.

Title one funding allows for staffing to provide intervention for students who are at risk of not meeting grade level standards. However, the best way to provide that intervention is often debated. The recent momentum is behind emphasizing a structured literacy approach for students in kindergarten through grade 2. However, due to the interruptions caused by the pandemic, the researcher wanted to know if applying the strategies that have been shown to be successful for kindergarten through grade two would show similar positive results with grade three students, and would accelerate their learning to bring them closer to grade level.

Brief Literature Review

For over two decades, as a result of studies behind the revisions of the Elementary Secondary Education Act, there has been considerable attention to research into the best

strategies for teaching students to read. From the U.S. Department of Education work on the National Reading Panel, to reading researchers and practitioners, and most recently including psychologists and neuroscience researchers, one thing remains clear, early intervention is critical for students struggling with learning to read (National Panel on Reading, 2002).

Despite all of these efforts, over all of these years, there are still a considerable number of students each year who are not reading on grade level. The data indicates that it is an even greater problem for students who are black, indigenous, and people of color (BIPOC), students learning English, or students who come from families that qualify for free or reduced lunch (Sparks, 2011). Instruction in the foundational skills of phonemic awareness and phonics have been identified as critical components of effective early intervention in all of the studies. However, most recently, researchers of what has been named "The Science of Reading," have specifically identified not only the sequence of the phonemic awareness and phonics skills, but also the instructional format in which they should be taught in kindergarten, first and second grades (Moats, 2009). Despite all of this effort, there have not been clear instructional recommendations from these researchers beyond grade two. Phonemic awareness and phonics knowledge is critical at all ages, as text complexity increases, yet teachers providing reading intervention services are often left to determine what is the best form of instruction for students beyond grade two (Fountas & Pinnell, 2012). As a result of this, and taking into consideration the interrupted learning that these students had experienced during their first and second grade years, the researcher wanted to see if applying the K-2 strategies within the Science of Reading research would accelerate the growth of the grade three students.

Statement of the Problem

In this study, the problem that was examined was how effective a systematic and sequential phonics-based intervention was in impacting the acceleration of reading growth. Looking at five third grade students, who were identified in need of intervention on the FastBridge aReading screener, which screened individual student readability and predicted student reading achievement, this study looked into the growth towards grade level goals on a Curriculum Based Measurement tool. It looked at biweekly progress monitoring growth and benchmark scores, as well as the cumulative growth over seventeen weeks. In addition, the data was correlated with the Fastbridge aReading screener administered at the mid and end of year.

Purpose of the Study

The purpose of this study was to find the impact a systematic and sequential phonics-based intervention had on third grade students' acceleration rate towards grade level expectations. Students who were involved in this study screened below or well below grade level expectations on the aReading screener and the benchmark FastBridge Curriculum Based Measurement (CBM) tool.

Research Question

The Research question was as follows: What impact does a systematic and sequential phonics-based intervention have on the rate of acceleration in reading growth for third grade students who are below and/or well below grade level expectations. This question will help the researcher identify if this type of instruction is significant to accelerating students' reading scores, and will help with instructional decisions for intervention programming in the future.

Definition of Variables The following are variables within the study:

Variable A (Independent Variable): The number of words that each student read accurately in the baseline assessment using the Fastbridge Learning platform.

Variable B (Dependent Variable): Student biweekly fluency measured using words per minute from the Fastbridge Learning platform.

Significance of the Study

This study was significant to the researcher and colleagues because it sought to collect data on student outcomes that could answer the question regarding the importance of including a phonics-based instruction for students in grade three, who showed on screening tools that they had gaps in their learning. Typically, phonics-based instruction is designed and implemented for students who are in kindergarten through second grade, when students are considered "learning to read." By third grade and beyond, students are considered to be in the "reading to learn" phase, as they would have had a good understanding of the foundational reading skills.

This action research is significant because it explores the importance of including phonics-based instruction for students who are in third grade and have entered the "Reading to Learn" phase (Fountas & Pinnell, 2012). Based on seven years of teaching students in first and second grade, the researcher was aware that students do not grow at the same rate in their reading achievement, and the researcher also knew the need for a solid set of foundational skills is critical to success in reading.

With this background knowledge, the researcher wanted to study the impact of providing intervention in the foundational skills that the students were missing with the goal of accelerating their growth toward meeting grade level expectations.

Research of Ethics

Permission and IRB Approval

"It appears that archival research typically does not warrant informed consent from the very parent/guardians/students when initial data collection was not intended to guide a study but guide reflective practice.

Still, IRB best practice would be to ensure that the (a) data is entirely de-identified; (b) to solicit consent from the institution (e.g., school, program, agency) that had a stake in the archival data to use such data; and (c) submit an exempt IRB application that affirms to the above points" (Jed Locquiao, personal communication, May 26, 2022).

Authorization to conduct the study from the school administrator of which the research took place, was collected.

Informed Consent The data collected was part of an archival research. No identifying information was used in the study. Confidentiality was protected through the use of pseudonyms (e.g., Student 1).

Limitations There are only a few limitations to this study. First, Covid-19 mitigations impacted student intervention minutes. Mid-year, all students from the school switched to a distance-learning model for two weeks. This required students to use the Chromebook given to them by the school, students to use their home internet - and assuming they had internet access at home, to be able to log on to daily lessons. While the expectation was that students would log on for their lesson, it was very difficult for all students to be able to do so. Even when students were able to log on and access the phonics lessons that were very similar to the lessons students

received in-person, the students were not able to manipulate hands-on materials needed for each lesson, which are critical components of the lessons.

In addition, throughout the year students were required to quarantine for a minimum of ten days if exposed to Covid-19. The amount of days would be increased in increments of ten days, depending on continued exposure level. Students who lost instructional minutes due to absences were unable to make up that lesson and would be expected to pick up when they returned. This was a tremendous challenge for students, families, classroom and intervention teachers.

Conclusions

In this chapter, the researcher outlined the purpose and content of the study: to better understand what impact a systematic and sequential phonics-based intervention would have on third grade students. The knowledge learned from this research gave educators insight on the importance of specific instruction for third grade students who are reading below or well below grade level. In the next chapter, the literature behind systematic and sequential phonics will be discussed.

CHAPTER 2

LITERATURE REVIEW

Introduction

In 1997, Congress asked the National Institute of Child Human Development (NICHD) to work with the U.S. Department of Education in establishing a National Reading Panel to evaluate existing research and evidence to find the best ways of teaching children to read. The panel was made up of 14 people, including leading scientists in reading research, college representatives, teachers, educational administrators, and parents. From this work, in 2002, several documents were published intended to provide a national response to inform instructional practices in reading. These documents included a 480-page report including the executive summary from each subgroup, as well as introductions to the topic areas, methodologies, questions, and implications for implementation; a 35-page executive summary including research methodology and the findings of each subgroup; a teacher's guide providing a framework for using the findings, specifically highlighting the five areas of reading instruction: phonemic awareness, phonics, fluency, vocabulary, and text comprehension; and an 8-page brochure designed for parents, and published in both English and Spanish, that described early literacy activities children would benefit from at home (NICHD, 2019).

This report proved to be instrumental in looking at the various components of effective reading instruction, and the components were eventually frequently referred to as the "5 pillars of Early Literacy" (NICHD, 2019). While this report came out two decades ago, it is extremely relevant today, as there is current momentum around revisiting the pillars, especially the pillars of phonemic awareness and phonics by specific groups, this time largely composed of

researchers in the areas of psychology and neuroscience. This recent surge of momentum, due in large part to the work of The Reading League, has brought forward the concepts that there is a science to learning to read, which is accomplished through a structured, systematic and sequential approach to phonemic awareness and phonics instruction (Moats, et al 2013).

The work and recommendations of the Reading League focus on the structure of instruction of phonemic awareness and phonics, often referred to as "foundational skills" to be provided to students in kindergarten through second grade. However, due to the interrupted education that primary students have had due to the pandemic, this researcher wanted to see if there would be a significant impact on the improvement of reading for students in grade 3, if they were provided with intervention in the structured literacy approaches that were defined for students in K-2.

Body of the Review

How to most effectively teach students to read has been studied by countless researchers throughout history, often resulting in divergent and even conflicting results. By the year 2002, there were at least four major consensus reports, including that of the National Reading Panel, but also other educational, psychological and neurological experts (Adams, 1994; Anderson et al., 1985; NICHD, 2000; Snow et al., 1998). The common question that has emerged since formal education began is when and how to teach the foundational skills of phonemic awareness and phonics (Montgomery et al., 2013).

This question, as well as the prevailing needs to address the achievement gap that has been present for decades between students of color and white students, prompted yet another round of research, this time dubbed "The Science of Reading" (Moats et al., 2013). These

researchers, mostly comprised of psychologists and neurologists, have taken the approach that there is a clear science to the most effective process for teaching students to read, and even state that they feel this research is so compelling that the debates on effective strategies should be over, and that the focus should now be on the finer details of teaching reading (Montgomery, 2013).

Researchers have basically fallen into two camps, those that believe that it is most effective to use “meaning-based” approaches, and those that believe in phonics-based approaches. (Lamintina et al., 2010) The most critical difference is whether it is necessary to teach phonics explicitly, or if students are able to learn phoneme-grapheme correspondences through sight-word memorization and a large variety of exposure to print. The pendulum of opinion and practice has swung very dramatically between the extremes, and all places in between (Chall, 1967; Stanovich, 2000).

Most recently, the researchers behind the Science of Reading have coalesced around common thought for instructional practices for students in kindergarten through grade two: "By second grade the most effective approach appeared to emphasize phonics, comprehension skills, and language study (including grammar usage, writing, and vocabulary) in almost equal proportions” (Foorman & Schatschneider, 2003). It was following this common thought that the researcher decided to apply to the third graders who, due to the pandemic, did not have the opportunity to be supported in their development of foundational skills.

In seeking additional literature to review for this study, the researcher found that often cited literacy research expert David Kilpatrick (2020) explained that struggling older readers, those above grade two, will “struggle to connect parts of spoken language to their alphabetic

forms" when they encounter multisyllabic words in more complex texts (Moats, 2013). "Problems with advanced phonemic awareness may go undetected by teachers once students are past first grade. It is recommended that any student who is less than proficient in reading and spelling, *no matter what age*, should have his or her phonological skills tested with a screener that includes advanced phoneme manipulations and that account for the automaticity of student response" (Montgomery, 2010).

Considering the fact that the debate about the most effective way to intervene when students are struggling to read has been going on for years, it unfortunately has been exacerbated by the interrupted education as a result of the pandemic. A study by Dr. Megan Kuhfeld and Dr. Beth Tarasawa (2020) predicted that in general, students will experience a learning loss of 30 percent in reading and 50 percent in math as a result of the crisis. Left unchecked, it's an academic setback that could derail the futures even of students who were previously on grade level—and would be disastrous for students who were already behind (NWEA, April 2020). "The students stuck in this vicious cycle are disproportionately the most vulnerable: students of color, from low-income families, with special needs, or learning English." (TNTP, 2020).

Theoretical Framework

Teaching students to read requires a number of components, and supported practice. Students must move from phonological awareness of recognizing that letters and combinations of letters visually represent sounds. Phonemic proficiency (i.e., automatic phonemic awareness) is central to efficiently storing words in long-term memory. If these skills are lacking, they should be addressed. Phonics can refer to a reading instruction technique but it can also refer to a set of skills a person possesses. Students need to have the skills to sound out unfamiliar written

words via phonetic decoding. Phonetic decoding occurs when a student applies letter-sound knowledge and phonemic blending to determine unfamiliar written words. (Kirkpatrick, 2009)

The most comprehensive theory of reading development, most often presented with a visual named Scarborough's "rope" is used to show how language comprehension and word recognition combine together for a skilled reader to develop (Moats & Tolman, 2009). The rope signifies that in order to make meaning of the words, students must be able to decode the words first, and then actually read the words to comprehend their meaning. It is on this theory that the basis for this research was formed, that students who are well below grade level need to accelerate their learning in the foundational skills so that they can progress with their peers in making meaning of what they read.

Research Question

What impact does a systematic and sequential phonics-based intervention have on the rate of acceleration in reading growth for third grade students who are below and/or well below grade level expectations?

Conclusions

This review of research supported the idea that instruction in foundational skills focusing on phonemic awareness and phonics, in a sequential instructional framework, is very effective for students in grades K-2. However, while the most effective ways to support students who are struggling to learn to read have been studied for years, there has not been clear consensus for the best instructional practices for students above grade two. Even the most recent research, widely promoted through organizations such as The Reading League, do not specifically state the best practices for students above grade two. In addition, because of the pandemic, some researchers

have predicted that the impact of the loss of instruction would affect students disproportionately based on risk factors, and have called for specific interventions to meet their needs to accelerate their learning to meet grade level expectations.

The next chapter will look at the research design, participants, data collection, analysis, alignment, and procedures of the action research study.

CHAPTER 3

METHODOLOGY

Introduction

This study was conducted to determine what the impact of a systematic and sequential phonics-based intervention had on accelerating reading achievement of third grade students. At the specific school, all third grade students were given the same screener, the Fastbridge aReader in the fall. This gave the researcher the opportunity to identify students who were below and well below grade level expectations, as set by the district.

The specific set of students were grouped together from various classrooms, and were scheduled to receive a daily thirty-minute intervention lesson by a Learning Specialist at the school. The Learning Specialist for this specific group was the researcher of this study. Students received the intervention as part of their What I Need (WIN) time, which is outside of core instruction time. Therefore, students did not miss out on any core instruction in their homeroom.

In addition to the aReader screener, students were also screened with a CBM fluency passage. Throughout the year, students in the study were progress monitored bi-weekly. A second screener was given in the Winter and a final screener was given in the Spring. All data was collected as part of this study with the expectation to see accelerated growth towards grade level targets.

Research Question

What impact does a systematic and sequential phonics-based intervention have on the rate of acceleration in reading growth for third grade students who are below and/or well below grade level expectations?

Research Design

The single subject research design best fits this action research study. This design can be used when the researcher is going to rely on procedures and collect numerical data (Mills, 2018). This study took place from October 2021-May 2022, meaning the condition length of this study allowed for the researcher to be able to gather enough data points to draw a conclusion from the pattern of the data collected (Fraenkel, 2012).

Setting

This study was performed in a K-5 school, in a suburban district in the Twin Cities Metropolitan area in Minnesota. The demographics of the student population of 446 is approximately 45% Black/African American, 18.8% White, 16.6% Hispanic, 10.5% Asian, 8.5% Two or More Races, and 1% Hawaiian/Pacific Islander. In addition, approximately 66.8% of students receive Free or Reduced Priced Lunch, 17% of the population of students receive Special Education services and approximately 38.9% are English Learners (Minnesota Report Card, 2022).

Participants

This research was conducted with five third grade students. There were three females and two males. Of the five students, two students were black, two students were Hispanic and one was Caucasion. Two received Multilingual Language services, in addition to their reading intervention. One student received Special Education Services for Speech and Processing. Four out of the five students came from homes where the parents are either divorced, separated, or not married, a frequent indicator of poverty.

Sampling Procedures

The sample for this single subject research was five third grade students showing the need for an intense phonics intervention, according to the FastBridge Learning Fall Screener. The students included had a variety of start scores on the initial screener. The variety was purposefully selected, to emphasize that if the hypothesis for this study were true, all students who screen as below grade level, need a systematic and sequential phonics-based intervention. The sampling was determined by the group of students who were assigned to the researcher for small group intervention.

Instrumentation

The Fastbridge Universal Screening and Progress Monitoring tools were used to measure individual student benchmark levels, as well as progress throughout the year. Two components of this comprehensive assessment system were used for this research project: aReading and CBMreading. This system was created to help teachers be able to quickly screen students using a combination of Computer-Adaptive Testing and Curriculum Based Measures. According to the Psychometric Evidence of FastBridge Universal Screening and Progress Monitoring System (2021), “The FastBridge aReading assessment is a computer-adaptive test that assesses the full range of reading skills from kindergarten through grade 12. By employing an adaptive test algorithm, the aReading test accurately estimates each student’s reading ability across the full range of abilities in each grade. It is intended as a universal screener to identify students at risk for academic delays and to provide results that help educators tailor instruction for each student’s needs, observe and quantify student reading behaviors, engage students in comprehension

conversations that go beyond retelling, and make informed decisions that connect assessment to responsive teaching."

FastBridge Curriculum-Based Measurement for Reading (CBMreading) is a version of curriculum-based measurement of oral reading fluency (CBM-R), which was originally developed by Stan Deno and colleagues at the University of Minnesota to index the level and rate of reading achievement (Deno, 1985; Shinn, 1989). CBMreading uses easy, time-efficient assessment procedures to determine a student's general reading ability. Both assessments are deemed to have high validity and reliability.

The aReading assessment was given to all of the third grade students at the school during the month of September. It was also given as a benchmark in January and May. All students took the assessment at their own pace on the computer. The results provided information to the teachers and intervention team to determine if the student qualified for intervention services. The phonics focused intervention utilized the Systematic Instruction in Phonological Awareness, Phonics, and Sight Words (SIPPS), a foundational skills program.

All of the students in this project received the intervention from the researcher in a small group setting each day for thirty minutes, following the procedures inherent to the program with fidelity with regards to pacing, timing and structure. The specific features of the SIPPS intervention focused on foundational skills: primarily phonics and vocabulary.

Progress towards improvement was monitored for each student biweekly with the CBMReading. Data was used to inform instructional decisions and to monitor the effectiveness of the interventions. While it was not expected that students would move out of the intervention program, it was a possibility, as meeting the needs of each student was the overarching goal. The

winter benchmark with the aReading was administered to all students in the school, to ensure that all of the students were receiving appropriate interventions. At this point, it was possible that students may have exited or new students added into the groups receiving intervention. For the purposes of this research project, only students who took the fall aReading benchmark, and remained in intervention groups for the entire year were included.

To conclude this research, the students took the aReading assessment in May. With this information, the researcher compared the effects of the interventions in comparison to the expected growth as identified by the FastBridge research and district expectations.

Data Collection

Three assessments supported this research study. The FastBridge aReader and CBM Benchmark assessments, which were administered in the Fall, Winter and Spring. In addition, using the FastBridge progress monitoring tool, students were assessed with a CBM passage for reading fluency, biweekly, on the last day of the week. Students worked with the researcher one-on-one to complete the one-minute timed reading. This took place during their regular thirty-minute small group lesson. Data were collected and stored using the Fastbridge CBM progress monitoring program.

Data Analysis

The Fall, Winter and Spring FastBridge Learning Screener scores and the weekly FastBridge Learning CBM progress monitoring scores were recorded in the FastBridge Learning program. Each individual student included in this study had an Individual Growth Report, summarizing all data collected. Through continuously keeping a close record of the individual student scores on reading fluency and accurately recording them throughout the year, the

researcher was able to use all of the data collected to determine if this specific intervention made an impact on accelerating growth toward student achievement on grade level expectations.

Tables 5-7 are different visuals representations of the same data. The researcher analyzed the data to come up with the following conclusions. The researcher observed each student's progress over three periods of time, each including three data points. During the first part of the study, from October until the winter break in December - all students made some growth. Four out of the five students showed moderate to significant growth in their words per minute. The researcher was happy to see that Student 5, who began the study the farthest behind, made the most growth, more than doubling the words per minute. While student 2 showed a decrease on the third data point, it appears to be an anomaly with the rest of the data collected.

During the second period from January through March, the data again indicated significant increases for four of the five students, with student 5 continuing to make the greatest amount of growth. Student 2 continued to have variable results, but still indicated significant improvement since the beginning of the study. The researcher did begin to have concerns about student 4, as the growth was not as great as student 5 despite also being farther behind than the other three at the start, and noted that attendance had started to become an issue.

In the last set of data, from April 2 through May 21, four of the five students demonstrated very positive growth, however this time the student who did not was student 4. Unlike in the first two periods of inconsistent growth, the researcher was happy to see that student 2 made consistent accelerated growth from the end of the second period to the end of the third. Unfortunately, student 4 continued to have issues with attendance, primarily due to Covid protocols, and the data showed that they were not able to maintain the growth of their peers.

Overall, the data showed what the researcher was hoping to see, with four of the five students making growth beyond what was expected for third graders throughout the time period . From the beginning to the end of the study, the data set of the increased words per minute of this group of students was 57, 54, 65, 13, and 63. The expected growth of third graders during the length of this study, at a rate of 1.6 wpm per week, is 25.8, as represented in Table 7. Therefore, four of the five made significantly more progress in increasing words per minute, by actually doubling the expectation.

Research Question and System Alignment

Variable A (Independent Variable): The number of words that each student read accurately in the baseline assessment using the Fastbridge Learning platform.

Variable B (Dependent Variable): Student biweekly fluency measured using words per minute from the Fastbridge Learning platform.

Table 3 shows the research question and how it is aligned with variables, design, instruments being used, validity and reliability, technique, and the source.

Table 3

Research Question Alignment

Research Question	Variables	Design	Instrument	Validity & Reliability	Technique (e.g., interview)	Source
What impact does a systematic and	IV: The number of words that each	Action Research	Pre-test screener using the FastBridge aReader	Students were given the same assessments and	Daily 30-minute intervention instruction. Pre-test	Five 3rd grade students.

sequential phonics-based intervention have on the rate of acceleration in reading growth for third grade students?	student read accurately in the baseline assessment DV: Student biweekly fluency measured using words per minute	and CBM Benchmark Assessments were given in the Fall, Winter and Spring. Bi-weekly progress monitoring occurred from October through May.	progress monitoring passages throughout the year. Data was collected on the same day for all students.	screeners and bi-weekly progress monitoring measuring reading fluency.

Procedures

The action research study took place during the school-wide third grade intervention block, that is called What I Need (WIN) time. This was from 9:45-10:15 every day. The initial FastBridge Screening assessment took place in the general education classrooms during the first week of school. This assessment took about one hour for students to complete on their individual Chromebooks.

The researcher worked with the other three Learning Specialists in the school to analyze the data from the screener to decide which students were showing reading behaviors below or well below grade level expectations. Since there was an opportunity to have four groups of third grade students, the intervention team including the researcher gave the students identified by the screener another informal assessment from the SIPPS curriculum. This assessment was used to place students within the curriculum at the corresponding sequential stage. The assessment measured students' use of phonics to read decodable words and their knowledge of sight words.

The earlier sections of the assessment included beginning reading skills and included two components of using phonics: student's knowledge of spelling-sound relationships and their ability to blend sounds (Shefelbine, 2013). This additional assessment ensures the specific intervention targeted each individual students' specific needs.

With the data collected from the SIPPS informal assessment, students were grouped according to their needs. The SIPPS screener showed that the students in this specific study identified as needing SIPPS Extension, beginning at Lesson 16.

The students came to the intervention classroom for the lessons during their WIN time. At this same time, all third grade students were in small groups working on lessons with different teachers, to meet their identified needs. With the researcher, there were only these five students in the small-group lesson, for the full thirty-minute instruction.

To ensure fidelity in the intervention, the researcher followed the same lesson format that had the same systemic routine pattern of mini activities. This included many opportunities to practice the targeted skills for the week, the sequential part of the lesson. Each lesson was completed in thirty minutes. The researcher had the opportunity to slow down different portions of the lesson or move more quickly to complete day two of the lesson in one setting, if necessary.

Each lesson started with a guided Phonological Awareness, with the students manipulating the beginning, middle, or ending sounds of a word, using sound boxes. Next, students worked on the sequence of phonics skills and practiced by reading decodable words. In addition, spelling sound cards from the SIPPS curriculum were used to support this step. At this point, any recent sounds from other lessons were also reviewed. Then students worked together to read a mixed list of words. This list included words with the newly learned sounds and

included words with the review sounds. If at any point the incorrect sound was made, the matching sound card would be presented, practiced, and then the word would be reread, until done correctly. The third part of the lesson was practicing sight words. This was done in a "read, spell, read, spell, read" pattern. New sight words were taught with each lesson and then rotated through 15-20 of the sight words from previous lessons. Step Four for the lesson was always guided spelling. It guided students through spelling different words, including those with the new and reviewed phonics skills. There were always four decodable words, two sight words, and one dictated sentence to guide the students through practice of encoding the phonic skills.

The fifth part of the lesson was reading a story. Students read the story with guidance of their teacher to apply their sight word and phonics knowledge that had been previously taught. Students read the specific story that matched with the lesson from that day. Students would either read the story aloud chorally or aloud to themselves, depending on the lesson level they were learning at the time. The researcher used this time to assess accuracy and fluency rate of the student and could do an informal 1-minute accuracy and rate check as needed (Shefelbine, 2013).

Throughout the daily lessons, when students made mistakes while answering aloud, the teacher had the whole group repeat the sound, word, or sentence again together. If needed, other tools such as pointing out the sound card, having the students repeat after the teacher, slow down to take longer to teach different portions of the lesson, or use the additional correlated lessons would be implemented. An example of this is teaching Lesson 16-A on day one and Lesson 16-B on day two. When students were grasping concepts quickly, the teacher did not need to slow down and could bypass the second day of the lesson (skipping Lesson 16-B.)

At the end of each two-week period, students were given a FastBridge CBM passage to check their reading fluency in one minute. The data were collected within the FastBridge Learning data tracking website. In addition, students were given mastery tests at the end of each mini-unit within SIPPS, about every other week, to guide the intervention lessons. Formative FastBridge CBM Benchmarking and aReading screening assessments were given in the Winter and Spring as well.

Ethical Considerations

The researcher ensured there would be no identifiable information presented within the study. The FastBridge Learning database held the identifiable ongoing scores for students, but the data necessary for this study was pulled from the database.

Conclusions

This chapter addressed how the researcher conducted the lessons, as well as how the researcher collected and analyzed the data. The data collected was used to determine the starting point within the systemic and sequential lessons, as well as the scope and sequence and the pace of moving through the lessons. The ultimate goal of the utilization of the data that was collected will be to identify if there was an accelerated growth in reading by the third grade students because of the systematic and sequential phonics-based intervention they received daily. This was part of a single subject research design, focusing on five third-grade students. The next chapter will include the results of the study.

CHAPTER 4

RESULTS

What impact does a systematic and sequential phonics-based intervention have on the rate of acceleration in reading growth for third grade students?

The purpose of the research was to determine if a systematic and sequential phonics-based intervention would make an impact on the rate of acceleration in reading growth for third grade students. After collecting the baseline data from the Fall benchmark, using FastBridge, and the SIPPS screener, the researcher had the data needed to plan and implement an intervention for the students in this study.

The sample of students had a range of beginning CBM scores, see Table 4.2. However, all of the students showed the same need according to the SIPPS curriculum, showing the need to start in SIPPS Extension, lesson 16/40.

Description of Data

For this study, the data collection took place between fall 2021 and spring 2022. Right away at the beginning of the 2021-2022 school year, all third grade students took a computerized screener called FastBridge aReader. This is an adaptive screener assessing reading ability and predicts reading achievement (Illuminate Education, 2002). See Table 4 for the individual scores on this test for the participants in this study. In addition, the students completed this screener in the winter and spring of the same year. In this district, there was the expectation that students would receive a specific score to be considered at or above grade level. These scores were: Fall - 496, Winter - 503, and Spring - 508.

Table 4

Individual Students' Scores on FastBridge aReading Benchmark Assessment

Students	Fall	Winter	Spring
Student 1	494	489	500
Student 2	485	492	516
Student 3	486	498	514
Student 4	445	472	462
Student 5	460	466	483

Note. FastBridge Benchmark CBM, on grade level expected scores from the district: Fall - 496, Winter - 503, Spring 508.

A benchmark Curriculum Based Measurement (CBM) was given to the participating students in the fall, winter and spring. This was the assessment that was used in conjunction with the bi-weekly progress monitoring assessments. See Table 5. The district expectation was for the third grade students to have specific scores at each benchmark to be considered on target: Fall - 97, Winter - 120, Spring 134.

Table 5

Individual Students' Fluency Scores on FastBridge Benchmark Curriculum Based Measurement

Students	Fall	Winter	Spring
Student 1	94	114	135
Student 2	90	106	124
Student 3	50	81	98
Student 4	45	72	75
Student 5	56	83	111

Note. FastBridge Benchmark CBM, on grade level expected scores from the district: Fall - 97, Winter - 120, Spring 134.

The bi-weekly CBMs were grade-level passages from the FastBridge Learning program. Data was collected between October 2021-May 2022. Specific dates of data collection were included in the table, along with the scores of the participants in this study. See Table 6. The district's expectation was for students to grow at least 1.6 words per week, or 3.2 words per two weeks.

Table 6

Individual Students' Fluency Scores on FastBridge Progress Monitoring CBM

	Week 1 10/15	Week 3 11/12	Week 5 12/10	Week 7 1/8	Week 9 2/5	Week 11 3/5	Week 13 4/2	Week 15 4/30	Week 17 5/21
Student 1	104	98	110	113	121	130	144	153	161
Student 2	85	86	81	112	95	107	111	138	139
Student 3	73	60	78	97	96	100	113	124	138
Student 4	16	20	26	20	30	41	NA	NA	29
Student 5	10	19	21	28	49	51	47	56	73

Note. NA = Not Applicable (No data collected for the student during that week, likely due to absences and not returning to school before the next progress monitoring was due) In addition

1.6wpm is the weekly goal of growth. This means that "on target" scores would increase at a rate of 3.2wpm in this table.

Results

A systematic and sequential phonics-based daily intervention lesson has shown positive results in helping this sample of third grade students achieve higher test scores that indicated accelerated learning. All of the students in this study showed growth in their reading fluency levels from the beginning to the end of the year. Table 7 shows the growth made on the students' progress monitoring fluency assessments, in comparison to their first benchmark CBM score. The CBM fluency progress monitoring tool measures words per minute (WPM). The ongoing expected growth target is listed under the specific dates, as a tool to observe if the student was continuing to make accelerated growth towards grade level expectations.

Table 7

Individual Students' Results in Comparison to their Beginning of Year Benchmark

	Baseline Score	Week 3	Week 5	Week 7	Week 9	Week 11	Week 13	Week 15	Week 17
Expected Growth in WPM	–	+3.2	+6.4	+9.8	+13	+16.2	+19.4	+22.6	+25.8
Student 1	104	-6	+6	+9	+17	+26	+40	+49	+57
Student 2	85	+1	-4	+27	+10	+22	+26	+53	+54
Student 3	73	-13	+5	+24	+23	+27	+40	+51	+65
Student 4	16	+4	+10	+4	+14	+24	NA	NA	+13
Student 5	10	+9	+11	+18	+39	+41	+37	+46	+63

Note. NA = Not Applicable (No data collected for the student during that week, likely due to absences and not returning to school before the next progress monitoring was due). WPM Words Per Minute

While all students made growth, Student 4 showed inconsistent results in comparison to their peers. After analyzing the data collected and informal data collected with regards to the specific student and their intervention, it became apparent that the data for this student was an outlier due to the fact that the student was not able to access the intervention at the same frequency as their peers because of environmental factors. However, by week 11, the student was almost at the end of year expectations for growth, so the researcher believed if the environmental factors had not been there and the student had been able to consistently access the intervention, we would have seen a greater acceleration by the end of the year than was collected for this study.

As the table shows, for the remaining four students who were able to access the intervention much more regularly, the rate of acceleration was much higher than expected. Their scores actually doubled the district expectations for accelerated growth in reading from beginning to the end of the year.

Conclusions

The analysis of the data exceeded the expectations of the researcher. While the researcher was confident that the intervention focusing on foundational skills for this group of third grade students, who were significantly below grade level at the start of the year, would be the best plan to meet their needs and accelerate their growth toward meeting grade level expectations, the results were surprising. Even one student who missed a significant number of class days, still

exceeded the expected growth rate throughout the year. The data shows that this group of students, who at the beginning of the year had the lowest scores of the entire third grade, ended the year very close to meeting grade level expectations because of the accelerated growth that they were able to make due to the specific focus on the foundational skills.

CHAPTER 5

IMPLICATIONS FOR PRACTICE

Action Plan

After reviewing the results, systematic and sequential phonics instruction made an impact on the acceleration rate of growth for the identified third grade students. The results showed that the students who received this intervention had an above expected rate of growth throughout the school year.

In the future, the researcher plans to continue to use the district provided tools (e.g., Fastbridge Learning), to identify students who identify as needing a systematic and sequential phonics instruction, despite being in grade 3. She will continue to include small-group instruction during the grade-wide WIN instructional block during the school day. Students will continue to have progress monitored bi-weekly, to ensure they are continuing to make the expected growth.

Plan for Sharing

As this study has shown, systematic and sequential phonics instruction is essential for students who are below grade level, even in the third grade. Instruction at the individual student level of need allows the opportunity for an above average acceleration rate towards the growth target. The researcher plans to share the success of this action research with fellow teachers and the school administrator while collaborating during professional learning communities.

REFERENCES

The Annie E. Casey Foundation. (2010). Early Warning! Why Reading by Third Grade Matters. Baltimore, MD: Fiester, L. Retrieved from: https://www.aecf.org/resources/early-warningwhy-reading-by-the-end-of-third-grade-matters/

Eunice Kennedy Shriver National Institute of Child Health and Human Development, NIH, DHHS. (2000). Report of the National Reading Panel: Teaching Children to Read: Reports of the Subgroups (00-4754). Washington, DC: U.S. Government Printing Office.

FastBridge Learning Online Assessment Tool (2020). Illuminate Education Inc. https://www.fastbridge.org/

Fountas, I. C., & Pinnell, G. S. (2010). Research Base for Guided Reading as an Instructional Approach. Retrieved October 26, 2020, from https://emea.scholastic.com/sites/default/files/GR_Research_Paper_2010_3.pdf

Fountas, I. C., & Pinnell, G. S. (2012). Guided Reading: The Romance and the Reality. The Reading Teacher, 66(4), 268-284. doi:10.1002/trtr.01123

Fraenkel, J., Hyun, H., & WallenN. (2012). *How to Design and Evaluate Research in Education* (8th ed.). The McGraw-Hill Companies.

Illuminate Education. (2002) *Reading Assessment: The Key to Science-Based Reading Instruction.* https://www.illuminateed.com/products/fastbridge/reading-assessment/areading/

Kirkpatrick, D. (2020) *Equipped for Reading Success.* Syracuse, NY. Casey and Kirsch publishers.

Kuhfeld, M. & Tarasawa, B. (2020). *The COVID-19 slide: What summer learning loss can tell us about the potential impact of school closures on student academic achievement*. Portland, Oregon. NWEA.

Lamintina, D., McKenna, M. C., Uribe-Zarain, X., & Wolpole, S. (2010). Relationship between coaching and instruction primary grades. The Elementary School Journal, 111(2), 115-40.

Minnesota Report Card. (2022). Retrieved June 12, 2022, from https://rc.education.mn.gov/

Mills, G. E. (2018). Action research: A guide for the teacher researcher. Pearson.

Moats, L. C. (2009). The speech sounds of English: phonetics, phonology, and phoneme awareness. Sopris West Educational Services.

Moats, L. C., & Tolman, C. (2009). The challenge of learning to read. Sopris West Educational Services.

Moats, et al. (2013) The Reading League Journal, Williamsport, PA. Publishers Service Associates.

National Reading Panel (U.S.) & National Institute of Child Health and Human Development (U.S.). (2000). *Report of the National Reading Panel: Teaching children to read : an evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*. U.S. Dept. of Health and Human Services, Public Health Service, National Institutes of Health, National Institute of Child Health and Human Development.

Newman, K. & Shefelbine, J. (2013). *SIPPS Extension Level.* Center for the Collaborative Classroom.

Nevills, P. & Wolfe, P. (2004). *Building the reading brain, prek-3.* Thousand Oaks, California: Corwin Press.

O'Connor, R. E. (2014). Teaching word recognition: effective strategies for students with learning difficulties. Guilford Press.

Park, Y., Chaparro, E. A., Preciado, J., & Cummings, K. D. (2015). Is earlier better? Mastery of reading fluency in early schooling. Early Education and Development, 26(8), 1187–1209. https://doi.org/10.1080/10409289.2015.1015855

Sparks, S. (2011) Study: Third Grade Reading Predicts Later High School Graduation. Education Week, April 8, 2011.

Wall, H. (2014). When Guided Reading Isn't Working: Strategies for Effective Instruction. Journal of Language and Literacy Education, 10(2), fall 2014, 135-140.