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**THE BENEFITS OF READING INTERVENTION ON STUDENTS IDENTIFIED AS BEING
AT-RISK FOR READING FAILURE**

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Brooke N. Brown

The Benefits of Reading Intervention on Students Identified as being at-Risk for Reading
Failure

A Field Study

Presented to

The College of Graduate Studies

Austin Peay State University

In Partial Fulfillment

Of

The Requirements for the Degree

Education Specialist

Brooke N. Brown

May 2013

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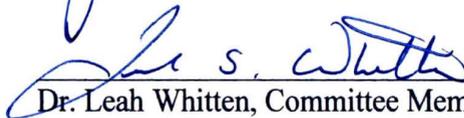
To the College of Graduate Studies:

We are submitting a Field Study written by Brooke N. Brown entitled “The Benefits of Reading Intervention on Students Identified as being at Risk for Reading Failure.”

We have examined the final copy of this Field Study for form and content. We recommend that it be accepted in partial fulfillment of the requirements for the degree of Education Specialist.



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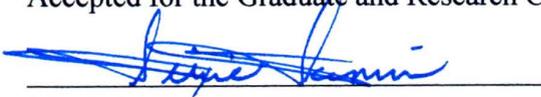


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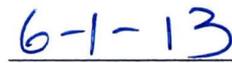
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Dedication

This field study is dedicated to my friends and colleagues. To my friend Misty, who was always there to help me when I felt overwhelmed. Also, to my colleagues who were there to support me in any way I needed. You were always willing to help me with my responsibilities so that I could work on my paper. Without everyone's help and support, I would not have been able to finish.

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ABSTRACT

BROOKE N. BROWN. The Benefits of Reading Intervention on Students Identified as being at Risk for Reading Failure. (Under the direction of DR. GARY STEWART.)

Purpose: The purpose of this study was to investigate whether the reading intervention program, Early Success, was effective in helping students at-risk for reading failure make significant gains.

Students need a strong reading foundation so that they can be successful in other academic areas (National Institute for Literacy, 2009). Students who are strong readers can read fluently, comprehend, decode, and have large vocabularies. Those students who do not have these components may be in need of reading intervention.

Methods: This study used data from 24 second grade students from a rural elementary school. The intervention group consisted of 14 students who were identified by a curriculum-based assessment as being at-risk for reading failure. The comparison group consisted of students of similar genders and ethnicities who were also identified as those who did not receive the intervention.

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CHAPTER I

Introduction

Importance of the Problem

Students' reading ability is an important determinate for their future academic success. If students struggle in reading, they are likely to struggle in other areas. Research has illustrated that half of the fourth graders in the nation read below a basic reading level (Musti-Rao & Cartledge, 2007). If students are to be successful and able to compete with students from other nations, they must exhibit a strong reading foundation. It is important that reading intervention is implemented immediately. The longer the wait, the harder it is for students to close the reading gaps (Musti-Rao & Cartledge, 2007).

Early reading instruction and intervention that focus on fluency, reading comprehension, phonemic awareness, phonics, and vocabulary are important (Bursuck & Blanks, 2010). These factors are the building blocks for successfully acquiring a strong reading foundation which can lead to success in other subjects.

Statement of the Problem

A strong foundation in reading skills is important to the academic success of every student. Without a strong foundation in reading, students will struggle in other academic areas (National Institute for Literacy, 2009). Likewise, a weak reading foundation can hinder students' success as they progress through school.

Purpose of the Study

The purpose of this study was to assess if the reading intervention process and program being used in an elementary school was effective in helping those students who were struggling to become successful readers. The students' reading ability was assessed using the AIMSweb program. The students most in need were identified to receive intervention. The reading program Early Success was used on those who were identified as being in need of extra intervention.

Research Questions

1. Do students who receive reading intervention make measurable progress between the beginning and the end of the year on the AIMSweb tests?
2. Do students who receive reading intervention make more measurable growth than their peers who did not receive reading intervention?

Research Hypotheses

1. There will be no statistically significant difference in growth between the beginning and the end of the year AIMSweb tests for students receiving Reading intervention.
2. There will be no statistically significant difference between the students who receive reading intervention and those not receiving Reading intervention on the AIMSweb tests.

Research Design

This study used a nonequivalent control-group design using quantitative data to compare whether or not intensive reading intervention would help students obtain greater growth in reading. AIMSweb scores from the beginning and end of the year 2011-2012 were used to compare whether growth was made and if greater growth was made in the intervention group in comparison to the non-intervention group. If a statistically

significant growth was noted, then the scores would be compared based upon socio-economic status, gender, and ethnicity.

Definition of Terms

1. **At risk** – Students who are not at grade level equivalency in reading (Wise, Sevcik, Morris, Lovett, Wolf, Kuhn, Meisinger & Schwanenflugel, 2010).
2. **Accuracy** – The ability to immediately identify a word correctly (Wise, et al., 2010).
3. **Automaticity** – The ability to immediately recognize words which bypass the decoding process (Wise, et al., 2010).
4. **CBM – Curriculum Based Measurement** – Measurements closely aligned to the curriculum which are designed to monitor progress. They are designed to be efficient, understandable, and inexpensive (Christ, Zopluoglu, Long, & Monaghan, 2012).
5. **Fluency** – The ability of a student to read text quickly and expressively and with few mistakes (National Reading Panel, 2000).
6. **Maze Oral Reading Test** – A maze passage consists of paragraphs that are missing words. The students choose from three words to complete each sentence. The students read a passage and choose words that will correctly complete sentences (Ardoin, Witt, Suldo, Connell, Koenig, Resetar, Slider, Willimas, 2005).
7. **Morphology** – The smallest unit of meaning (Lely and Marshal, 2010).

8. **Phonemic Awareness** – An understanding that the spoken language is made up of different small groups of sound and those groups can be changed to form different sounds (Young, Chandler, Shields, Laubenstein, Butts, & Black, 2008).
9. **Phonics** – The systematic and predictable organization of letters and spoken sounds (Bursuck & Blanks, 2010).
10. **Progress Monitoring** – Repeated measurement of performance to inform the instruction of individual students in general and special education (National Center on Response to Intervention, 2010).
11. **Prosody** – Ability of a person to read a text while simultaneously being able to use the correct expression while reading (Wise, et al., 2010).
12. **R-CBM – Reading Curriculum Based Measurement** – Reading Curriculum-Based Measurements are assessments students read aloud. The teacher listens to the student read a passage and marks the words the student says incorrectly (Ardoin & Christ, 2009).
13. **RTI – Response to Intervention** – Intervention program which integrates assessment and intervention using several different levels of prevention. The purpose is to reach the highest level of student achievement and to limit behavior problems (National Center on Response to Intervention, 2010).
14. **Syntax** – Syntax is the ability to read and understand a sentence (Lely & Marshal, 2010).

15. **Tier 1** – Students who are able to make growth from the instruction they receive in the regular classroom. In Tier 1, the school-wide testing process used three times a year is sufficient to monitor and assess if students are progressing in the general classroom (Denton, 2012).
16. **Tier 2** – Students who are identified during screening as being at-risk for reading failure. These are students who need more than just the regular classroom setting to help them be successful. Tier 2 students usually score below the benchmark on the screening measure (Bursuck & Banks, 2010).
17. **Tier 3** – Students who are struggling in the classroom and have received extra intervention, but are still showing no improvement. Response to Intervention Tier 3 intervention consists of regular classroom instruction along with supplemental instruction (Denton, 2012).
18. **Verbal Language** – A student's first experience with vocabulary which leads to learning to read and occurs in the home setting (Sticht, 2011).
19. **AIMSweb** – A Curriculum-Based Measurement monitoring framework used to determine student progress in Reading and Mathematics.

CHAPTER II

Review of Literature

Introduction

In order for students to be successful in the world, they need to have strong language and literacy skills. Without these skills, students will struggle in every area in which they study (Carter, Chard, & Pool, 2009). Studies have shown that a large percentage of students reach the fourth grade without the basic levels of reading achievement needed to be successful (The National Early Literacy Panel, 2008). If students do not obtain the skills needed to read in the primary grades, they are unlikely to learn to read at a successful level at any point in their education (Sloat, Beswick, & Willms, 2007). The literature that follows explores how students' literacy develops factors that influence literacy, and why it is important to identify students with reading difficulties early and provide intervention.

Early Reading Development

Reading is an important skill for students (National Institute for Literacy, 2009). Developing reading skills is important for a student to succeed academically (Meishinger, Bloom, & Hynd, 2010). If students struggle in reading, then they are more likely to struggle in other areas. The most important elements that an effective reading program needs to include are phonemic awareness, phonics, fluency, vocabulary, and text comprehension (National Reading Panel, 2000). If students are to be academically successful, then they need to be proficient in all five reading areas.

Phonemic awareness is an understanding that the spoken language is made up of different small groups of sound, and those groups can be changed to form different

sounds (Young, et al., 2008). According to Crim, Hawkins, Thornton, Rosof, Copley, and Thomas (2008), the phonemic awareness stage is extremely important. In this stage the student is forming the foundation of their reading skills and it will determine their future success in reading. When teachers address phonic skills in their classroom, they can either use a systematic-phonics program or a nonsystematic phonics program. According to De Graaff, Bosman, Hasselman, and Verhoeven (2009), students in systematic programs showed greater reading gains than those students who were in non-systematic programs.

A systematic-program is taught in a sequential order, and phonic skills are organized into different categories. These categories include synthetic phonics, analogy phonics, embedded phonics, larger unit phonics, and phonics through spelling. Each of these categories has one thing in common. According to De Gaaff et al. (2009), all of these approaches have phonic elements such as simple grapheme-phoneme correspondences, and onset and rimes are taught sequentially.

When teachers use a systematic-program, they begin by teaching basic sounds which are taught in an order that builds progressively upon themselves. Teachers do not move on to the next stage until the students show mastery in the current stage. Throughout the lessons, teachers will continuously do a cumulative review of the phonics the students are learning. Once the students have mastered isolated sounds, they can move onto learning the sounds of consonants, vowels, digraphs, blends, and diphthongs. After students have mastered the ability to break down unknown words and sound them out, they can more easily build their reading fluency (De Gaaff et al., 2009).

Students who are considered fluent readers are able to read written text quickly with few mistakes. They are also able to read the text with expression (National Reading Panel, 2000). Wise et al. (2010) describe fluency as a combination of accuracy, automaticity, and prosody. Accuracy is the ability to identify a word correctly instantly. The ability to quickly recognize words that bypass the decoding process is automaticity. Herold, Nygaard, and Namy (2012) refer to prosody as the ability to read while using pitch, intonation, stress, and pauses expressively.

Automaticity has the greatest impact on a student's comprehension of text out of the three components of reading (Wise et al., 2010). When a child is able to read with automaticity, they are better able to focus on what the words mean and not on how to decode unknown words. A child cannot become a fluent reader until they are able to quickly identify unknown words. Hudson, Isakson, Richman, Lane, and Arriaza-Allen (2011), suggested one of two methods to help improve a student's reading fluency and automaticity; goal setting and corrective feedback. When a student helps set a goal for themselves, they are more likely to be motivated to reach that goal. Also, when a student is given corrective feedback during or immediately after reading a passage, they are more likely to increase their reading rate and accuracy.

Erekson (2010) describes prosody as the music of speech, which includes components like pitch, stress, duration, and loudness. Prosody is important because it is a link to fluency which then can lead to comprehension (Schrauben, 2010). According to Schrauben (2010), prosody is part of phonology and helps students to recognize and interpret sound segments in words more quickly and easily. When a student is able to manipulate words quickly, they are more able to focus on comprehending the passage

they are reading. The most common instructional method used to help build fluency is repeated readings. The purpose of repeated readings is for the reader to reread a passage until they can read it fluidly and in a flowing manner (Schrauben, 2010). Repeated readings can also help a student build their prosody. Once they are able to read a passage in a flowing manner, then they can work on reading it with expression.

In the early elementary years, students are learning to read, but once students reach the fourth grade they are reading to learn. Less emphasis is put on learning to read in the upper elementary grades. If students are still struggling to read by the fourth grade and have not received intervention, they are unlikely to build a strong reading foundation. In order for students to be successful, they need to be able to read fluently and to understand what they are reading (Schrauben, 2010).

The National Reading Panel (2000) describes how, in the later grades, students are expected to read not only in Reading class, but also in other content areas. Science and Social Studies are content areas in which reading mostly consists of non-fiction material. Most of this material is new to the students. Students who normally struggle in Reading will find reading non-fiction material frustrating and are likely to give up (The National Reading Panel, 2000). If students feel overwhelmed by the content they are reading and avoid reading it, then they are unlikely to improve their reading skills.

In order for students to become fluent readers, they need to know the meaning of the words they are reading. For students to be able to comprehend what they are reading in the upper grades, they need to be proficient in recognizing words and have a large vocabulary (Biemiller & Boote, 2006). If students do not know the definition of the word they are reading, they are unlikely to comprehend what they are reading.

Pullen, Tuckwiller, Ashworth, and Lovelace (2011), suggest that the majority of the words students learn are from conversations they have had with their peers and parents. This is only effective up to a certain point because people usually speak with the same vocabulary they have always used. The average person rarely adds new words to their vocabulary; therefore, their children do not learn new vocabulary from them. Pullen et al. (2011) noted the books children usually read for themselves contain only words children recognize naturally. This means students have limited opportunity to develop extensive vocabulary.

Pullen et al. (2011) further describe ways teachers can introduce more complex vocabulary to students. One way teachers can expose their students to new vocabulary is by reading books to students that are above their reading level. Higher-level books usually have higher-level vocabulary. While teachers are reading books to the class, they can explain the vocabulary with which the students may be unfamiliar. Though reading aloud to students exposes them to new vocabulary, it does not ensure that the students are learning and retaining the new vocabulary (Pullen et al., 2011).

Pre-teaching vocabulary and having students use the vocabulary in a meaningful way can guarantee that students are learning and retaining new words. The National Reading Panel (2000) suggested that a deeper understanding of vocabulary instruction is necessary for strong vocabulary development. Students need to have words explained to them in a way that they will understand, be shown pictures that illustrate the words they are learning, to see them used in a sentence, and to be able to write a sentence using the vocabulary correctly. The students also need to be able to identify when a word is not

being used correctly and to be able to connect the vocabulary they have learned to the real-world so that the word is meaningful to them.

If students do not have a strong foundation in the literacy areas of phonological awareness, phonics, fluency, and vocabulary, then students will not be able to comprehend the text they are reading. Each reading area is dependent on the others for reading success. According to Lely and Marshal (2010), vocabulary knowledge, morphology, and syntax play a critical role in reading comprehension.

Lely and Marshal (2010) describe morphology as the smallest unit of meaning. Most words in the English language do not follow a regular spelling pattern. Since the United States is a mixture of different cultures, the language has become a mixture of many words from different languages. This has led to irregular spellings in English. In order for students to be able to identify and decode these irregular words, they need to have a foundation in morphology (Lely & Marshal, 2010).

As noted by Lely and Marshal (2010), syntax is the ability to read and understand a sentence. Sentences are made up of several different words, and in order for students to comprehend what they are reading, students must be able to put those words together to form sentences. Comprehension is dependent upon phonemic awareness, phonics, fluency, and vocabulary. These areas are important for developing reading skills.

Many research studies suggest that teachers have the most influence in school on students' learning (Byrd, Rasberry, & Center for Teaching Quality, 2011). Among the characteristics of an effective teacher are: showing leadership qualities; establishing a respectful environment; knowing the content very well; facilitating learning; and always reflecting on teaching practices (Byrd, Rasberry, and Center for Teaching Quality, 2011).

Outside Influences on Reading Development

One-third of the students who initially enter school are likely to develop long-term reading problems due to a lack of language and early literacy skills (Carter, et al., 2009). According to Sticht (2011), verbal language is a student's first experience with vocabulary, and leads to learning to read, which occurs in the home setting. The researcher found there is a statistically significant difference in the amount of oral language a student hears depending on the social-economic status of the household and also discovered that the language gap that results in an achievement deficiency begins at home (Sticht, 2011).

Bracken and Fischel (2008) also noted the difference in students' abilities upon entering school. Some students had stronger language and literacy skills. It was suggested that students with more advanced skills had more exposure to verbal and written vocabulary. Literacy is built upon what they hear and say while children are growing and the interactions between parent and child before school had a significant impact on later reading ability (Sticht, 2011). Sticht (2011) researched many studies that showed when students had a higher vocabulary before their school career started, they would have a higher ability as readers later. Students who entered school with a lower vocabulary usually had a low reading ability.

There are several things parents can do to help their children develop a strong literacy foundation. Parents can provide opportunities for their children to learn. According to Hannon (1995), acknowledging when children have done well academically or learned something new, engaging with children in reading activities, and being a good

role model by reading themselves and showing children reading in a fun activity, are good strategies.

Carter et al. (2009) suggested finding everyday opportunities to incorporate practice of vocabulary, language, and reading skills. Parents could talk often with their child, could ask their child questions about the school day, and could discuss the things in which the child is interested. Also, parents could teach and encourage their child to greet others and have conversations with others. Instead of having their child play alone while the parents are preparing dinner or completing some other activity, they could include their child in the activity. The parents could have the child help measure out ingredients or give him or her directions on how to set the table. In turn, the children are learning how to follow steps.

If children are too young for these tasks, parents could help their children develop phonological skills. Kirby and Hogan (2008) suggested playing games like having magnetic letters on the refrigerator that the child can play with while the parent is busy. They could also play rhyming or memory games. While at the store, the parent could point out items to the child and have the child identify them, or the parent could read the name of new items to the child. By using everyday activities to incorporate vocabulary, language, and reading skills, a child could be better prepared when he or she enters school. Parents are a child's first encounter with literacy, and they can greatly impact a child's reading development (Carter et al., 2009).

Research has suggested that the feelings shown through verbal language can influence the development of traits such as motivation and persistence in learning (Sticht, 2011). When parents have high academic expectations of their child, their child will

more likely view their education as important. When parents acknowledge their child's academic achievements, this has an influence on the child's performance in school.

Harris and Goodall (2007) suggested that parents have the greatest influence on how well their children develop literacy. Parents could support literacy at home by reading aloud to their children. Children hear language for many years before they learn to read. They are able to comprehend verbal communication much more easily than reading comprehension when they are older (Sticht, 2011). When parents read aloud to a child, they are exposing them to new vocabulary. They are also teaching them that reading can be an enjoyable activity.

There are many activities available to parents that will enable them to work with their children to promote literacy development. They can take their children to the library, teach them songs, or play with letters and numbers. By interacting with their children while they learn, they are teaching their children to enjoy literacy. The earlier and the more involved parents are with their child's literacy learning, the larger the impact. Kirby and Hogan (2008) found that children who had parents who read to them, taught them letters, letter sounds, and had a large number of books in their home were better readers than those who did not have the same exposure.

Research has suggested that when parents demonstrate that reading is important, they will have children who also feel it is important. The children are also more likely to read for fun (Cole, 2011). It is important for parents to demonstrate that reading is a fun, exciting, appealing, and beneficial activity. Children look up to their parents. When they see that their parents value reading, they will likely be more inclined to voluntarily read.

Response to Intervention

Response to intervention (RTI) is an assessment and intervention program that has multiple levels to accommodate different student's needs. The purpose of the system is to maximize student achievement (National Center on Response to Intervention, 2010). Response to intervention consists of multiple parts: (1) a school-wide, multi-level instruction for preventing school failure; (2) screening; (3) progress monitoring; and (4) data-based decision-making for instruction, movement within the levels, and special education identification. According to The National Center on Response to Intervention (2010), Response to Intervention is a program that is focused on prevention. It uses assessments and instruction to guide educators' decisions about what is best for their students.

Response to Intervention is made up of three tiers. The classroom setting is the first tier in RTI. The majority of the students in a classroom are able to receive the education they need from a whole-group setting. Teachers are expected to teach using evidenced-based reading instruction and to supplement that instruction with intervention strategies when needed. The intervention strategies teachers use need to be based upon data gained through assessments (Denton, 2012).

Tier 2 in Response to Intervention is for the students who are identified during screening as being at-risk for reading failure. These are students who need more than just the regular classroom setting to help them be successful. Tier 2 students usually score below the benchmark on the screening measure (Bursuck & Banks, 2010). These students will receive extra small-group instruction outside of the classroom that will focus on the areas in which they are struggling. These students should receive at least 20

to 40 minutes of instruction three to five times a week (Nation Center on Response to Intervention, 2010). The instructors are to constantly be assessing the students to change their instruction to meet their needs. Response to Intervention Tier 2 students usually score below the benchmark on the screening measure.

Response to Intervention Tier 3 intervention consists of regular classroom instruction along with supplemental instruction. One does not replace the other due to the fact these students need extra instruction and practice (Denton, 2012). The purpose of the three tiers is to help teachers identify students who may need to receive special education services as early as possible.

Screening all students at the beginning of the year is very important to help quickly identify those students who may be struggling or need extra help (Johnson, Mellard, Fuchs, & McKnight, 2006). Response to Intervention uses a two-step testing process. The first testing process is a test given to all students three times a year to assess their initial abilities and track their growth. The second screening process is implemented for the students who, in the initial screening, showed they may struggle academically. The second screening process is given weekly to monitor the students who showed a risk of a learning difficulty (National Center on Response to Intervention, 2010).

An effective screening measure should consist of three criteria. According to Johnson et al. (2006), an effective screening system needs to identify those students who are the most at-risk of reading failure. It needs to be easy to use, and it needs to help target those in need so they can be helped and show improvement. The assessment also needs to be accurate, have a cut score, and be efficient. A cut score is the lowest score

that separates the students who are not struggling from those who may need reading intervention (Johnson et al., 2006).

Once all of the students have been screened, a cut score needs to be used to identify those who may need intervention (Johnson et al., 2006). A school can adjust a cut score; however, guidelines need to be created to address whether students who score close to the cut score are included. The purpose is to identify students who need more instruction than the regular classroom can provide.

The most important purpose of a testing system is to identify those who perform poorly and most likely need further assistance (Johnson, et al. 2006). Schools are not supposed to use the screening as a way to identify students who need to be referred for special education services. The purpose of the screening is to help identify students who are at-risk of struggling.

The final component of a screening is that it needs to be efficient. The best testing system is one that is easy to use and easy to implement (Johnson et al., 2006). If a test is time consuming, then the teacher may be less likely to implement it. Additionally, if the screening takes too long, the tester may lose the focus of the student, thereby, adversely affecting the results.

Traditional assessments are given at the end of a chapter or at the end of the year. These traditional assessments are not useful in Response to Intervention because, if it is an end of the year assessment, teachers do not get the results until the next year. Therefore, teachers cannot use the results to help guide their teaching. Progress monitoring is an assessment procedure that helps identify whether or not students are

benefitting from the classroom instruction they are receiving and if the curriculum is sufficient for them to learn (Johnson et al., 2006).

In order for progress monitoring to be effective, it needs to be implemented at least once a month, and the design needs to assess the students' improvement (National Center on Response to Intervention, 2010). By assessing their improvement, students can be identified if they are not making progress. Those identified as not making progress may need additional or alternative forms of instruction. Progress monitoring needs to assess the children's progress over the school year. In order to do this, teachers need to assess their students at regular intervals throughout the year. Also, teachers need to use the results from the progress monitoring to adjust their teaching.

In Response to Intervention, progress monitoring is used in all tiers to assess whether students are making progress. Progress monitoring helps to determine whether students need to be moved to another tier or be assessed for special education services (National Center on Response to Intervention, 2010). Different levels of progress monitoring need to be used based upon the tier in which students are placed. Tier 1 students are able to make growth from the instruction they receive in the regular classroom (Denton, 2012). For students in Tier 1, the school-wide testing process used three times a year is sufficient to monitor and assess if students are progressing in the general classroom. The purpose of multiple tests is to compare the scores and determine if the student is making progress. If students are not making progress, then they may need to be further tested to determine if they need to be moved into another tier.

Tier 2 and Tier 3 monitoring is slightly different from Tier 1 monitoring. The purpose of the monitoring in Tier 2 and Tier 3 is to determine if the intervention students

are receiving is effective in helping them learn. The monitoring can also help determine if students can be moved back to Tier 1 instruction in the classroom, if they need to be moved to a more intensive intervention in Tier 3, or if they need to be referred for testing for special education (National Center on Response to Intervention, 2010). Progress monitoring in Tier 2 and Tier 3 needs to be implemented more frequently than the monitoring in Tier 1.

According to Casey, Robertson, Williamson, Seri, and Elswick (2011), students in Tier 2 and Tier 3 need to be monitored closely, because these students do not need to remain there for longer than one grading period. These students need to be monitored at least weekly to determine if the interventions are working. Also, the results of the progress monitoring can be used to help refer students to be tested for special education. The results of these assessments can help the teacher decide if the current instruction is effective or if the student needs more direct instruction (Denton, 2012). If progress monitoring consistently shows students are not making progress after intensive intervention, then students may be in need of special education.

Students' oral fluency and comprehension are assessed each week. One monitoring system used weekly to assess students comprehension in Tier 2 and Tier 3 is a maze comprehension assessment. When students are tested using a maze comprehension assessment, their scores are compared to the other students in the grade level to identify those who are below the 5th percentile and need intervention. It was originally developed to help special education teachers write goals for their students and to continually monitor their progress. A maze assessment is a set of short tests that usually take about three minutes (Shinn, 2007). The students read a passage and choose words that will

correctly complete the sentences. A maze passage consists of paragraphs that have missing words. The students choose from three words to complete each sentence (Ardoin, et al., 2005). The students are tested weekly and if students do not show improvement, then it may be decided that they need more intensive intervention.

The other assessment used weekly in Tier 2 and Tier 3 to assess a student's oral fluency is the Reading Curriculum-Based Measurement (R-CBM). Reading Curriculum-Based Measurements are assessments students read aloud. According to Ardoin and Christ (2009), the teacher listens to the student read a passage and marks the words the student says incorrectly. The student is given a minute to read as much of the passage as possible. The teacher is assessing the number of words the student reads correctly in a minute. This number becomes the student's words read correctly per minute or WRCM score.

In order for the Reading Curriculum-Based Measurement to be reliable, the teacher needs to use a system that is standardized. Originally, teachers used passages they selected from the students' textbooks to assess the students' fluency. This was found to not be the best way to choose passages because the passages varied too much in difficulty (Ardoin & Christ, 2009). According to L. S. Fuchs and Fuchs (2011), in order to truly assess a student's fluency, the passages they read need to change each week, but the skills and difficulty level need to remain the same. This way the teacher can track the growth or regression of the student.

Early Success

Early Success is a reading intervention program designed for first and second graders who are below grade level. Early Success is based on the program Early

Intervention in Reading or EIR (What Works Clearinghouse (WWC), 2008). Early Intervention in Reading is a program which was created to give students at-risk for reading failure extra instruction (What Works Clearinghouse (WWC), 2007). The program consists of phonemic awareness, phonics, contextual analysis, repeated readings, and writing. Early Intervention in Reading is a program which is designed to be used for whole-group instruction in grades kindergarten through second even though small group instruction can be implemented if students are still struggling. In the third and fourth grades only, small group instruction is used (What Works Clearinghouse (WWC), 2007).

In the lower grades, the Early Intervention in Reading program consists of lessons that last approximately fifteen to twenty minutes. This instruction is used only as supplemental instruction and not as the core instruction. In kindergarten instruction, the activities can include listening to stories, rhyme, phonemic segmentation, and letter and sound recognition (What Works Clearinghouse (WWC), 2008). First and second grade instruction consists of coached readings, phonemic awareness, phonics, sentence writing, vocabulary, and comprehension.

Early Success is not a program to be used for the whole classroom. Instead, it is to be used as remediation for small groups. In order for the remediation to be effective, the groups do not need to be larger than seven students. A teacher or teaching assistant needs to lead the students in a fifteen to twenty minute lesson every day (What Works Clearinghouse (WWC), 2008). The Early Success program consists of several different components. The components are phonics, word-learning activities, reading fluency, vocabulary, and comprehension. These are components that research has documented as

important for the development of a strong literacy foundation (What Works Clearinghouse (WWC), 2008).

Small group instruction in second and third grade consists of several components. According to What Works Clearinghouse (WWC),(2008), repeated readings of familiar stories and coached reading of new stories is a large component of the intervention. When students practice re-reading a familiar story, they are building their fluency. To help build the student's confidence when reading unfamiliar material, the teacher coaches the student through the new story. The intervention program also focuses on phonemic awareness, phonics, sentence writing, vocabulary, and comprehension. According to Bursuck and Blanks (2010), for reading instruction to be effective, it needs to include phonemic awareness, phonics, fluency, vocabulary, and reading comprehension.

CHAPTER III

Methodology

The purpose of this study was to assess if the reading intervention process and program used in a district in Middle Tennessee was effective in helping struggling students become successful readers. Students' reading abilities were assessed using the AIMSweb program, and students most in-need were identified. The reading program, Early Success, was used on those who were identified as being in-need of extra reading intervention.

Elementary School Characteristics

The students in this nonequivalent control-group study were chosen from a rural elementary school in Middle Tennessee for the year 2011-2012. The school population contained 670 students in grades ranging from Pre-K to fifth. The school consisted of a student population by grade level of: 15 in Pre-K; 113 in Kindergarten; 108 in 1st grade; 123 in 2nd grade; 106 in 3rd grade; 93 in 4th grade; and 112 in 5th grade.

Table 1 describes the make-up of the 670 students from which the data was taken. Forty percent (269) of the school's population were economically disadvantaged. Socio-economic status was based upon whether or not the student received a free or reduced lunch. Fifty-four percent (362) of the school's population were males and forty-six percent (308) were females. Although the school had a large population of students, the school, as a whole, was not ethnically diverse. Only eight percent (54) out of the 670 students were non-white. The minority population consisted of African-American, Hispanic, Native American, and Asian students.

Table 1

Elementary School Composition

Grade	Total	ED	Gender	Ethnicity
Pre-K	15	4 (27%)	6 male (40%) 9 female (60%)	13 (87%) white 2 (13%) minority
K	113	48 (42%)	62 male (55%) 51 female (45%)	103 (91%) white 10 (9%) minority
1	108	42 (39%)	59 male (55%) 49 female (45%)	97 (90%) white 11 (10%) minority
2	123	51 (41%)	61 male (50%) 62 female (50%)	118 (96%) white 5 (4%) minority
3	106	34 (32%)	69 male (65%) 37 female (35%)	98 (92%) white 8 (8%) minority
4	93	40 (43%)	47 male (51%) 46 female (49%)	83 (89%) white 10 (11%) minority
5	112	50 (45%)	58 male (52%) 54 female (48%)	104 (93%) white 8 (7%) minority
Total	670	269 (40%)	362 male (54%) 308 female (46%)	616 (92%) white 54 (8%) minority

Selection of Participants

The participants for the study were in the second grade. The students who received the intervention were identified by the school system's Curriculum-Based Measurement used in the AIMSweb progress monitoring framework. A letter was sent home with the students who were identified as being at-risk. They were offered a thirty minute intervention time before school started. The students whose parents gave permission received the intervention. The comparison group was made up of students who did not receive the Early Success reading intervention.

The comparison group was made up of students who were matched to the intervention group based on scores, socio-economic status, gender, and race. Each group consisted of fourteen students.

Table 2

Second Grade Composition

Grade	Total	ED	Gender	Ethnicity
2	123	51 (41%)	61 male (50%) 62 female (50%)	118 (96%) white 5 (4%) minority

Table 2 describes the composition of the second grade in which the reading intervention was implemented. Out the school's population of 670 students, eighteen percent (123) of them made up the second grade. Forty-one percent of the students in second grade were considered economically disadvantaged (ED). A student's socio-economic status was determined based upon whether or not they received lunch at a free

or reduced rate. The grade level contained about fifty percent females and fifty percent males. As it was with the school composition as a whole, the second grade was not ethnically diverse. The majority, ninety-six percent, of the grade level was white with 118 of the 123 students being white. The remaining four percent consisted of Asian, African-American, and Hispanic students.

Table 3

Early Success Intervention Composition

Grade	Total	ED	Gender	Ethnicity
2	14	8 (57%)	7 male (50%) 7 female (50%)	14 (100%) white

Table 3 describes the demographics pertaining to gender of the intervention group which consisted of seven female and seven male students. Of the identified students in the second grade who needed intervention, these were the students whose parents gave permission to participate. The socio-economic status of each student was determined by whether or not they received a free or reduced lunch. Approximately fifty-seven percent (8) of the students in the intervention group were considered economically disadvantaged. Out of the fourteen students who received the intervention, seven received free lunch and one received lunch at a reduced rate. Due to the fact that the school was located in a more rural area, the school did not consist of a diverse population. The intervention group contained only white students.

Table 4

Non-Intervention Composition

Grade	Total	ED	Gender	Ethnicity
2	14	7 (50%)	3 male (21%) 11 female (79%)	12 (86%) white 2 (14%) minority

Table 4 illustrates the demographics of the non-intervention comparison group for gender and ethnicity. When the comparison group was constructed the intervention students and the non-intervention students were first compared based upon their test scores. Those students who's scores most closely resembled those in the intervention group were selected. Since the scores were looked at first for comparison, the non-intervention group consisted of three males and eleven females. Therefore, seventy-nine percent of the group consisted of females in comparison to the fifty percent which were in the intervention group. The socio-economic status of the group was again determined by whether or not the students received free or reduced lunch. Of the fourteen students, half of the students (7) in the control group received free or reduced lunch. The ethnicity of the control group was more diverse. Two of the students in the non-intervention group were African-American. In comparison to the intervention group which was one-hundred percent white, the non-intervention group was only eighty-six percent white.

Confidentiality

To insure the protection of the participants, permission for the study was obtained from the Institutional Review Board at Austin Peay State University. Permission was also granted by the Director of the School System involved in the study. The data was

gathered and coded by an employee of the School System. The research received only contained data free of any identifiers to maintain complete anonymity for all participants in the study. The data was saved on a Universal Serial Bus (USB) flash drive. After the study was completed, the data was deleted from the flash drive.

Research Design

This study used a nonequivalent control-group design using quantitative data. The data was obtained during the 2011-2012 school year. The students were not randomly assigned to their groups, and both groups were given pre-tests and post-tests during the year. The dependent variable in the research study was the student academic performance as determined by the Curriculum-Based Measurement Test given to each student to identify those students who are not at grade level equivalency. The independent variable was the Early Success Reading Intervention Program. Only those students deemed most at-risk for reading failure received the intervention. The scores of the intervention group were compared to the scores of the randomly selected non-intervention group scores.

Instrumentation

Students were tested using a Curriculum Based Measurement Test (CBM), associated with AIMSweb, which was given three times throughout the year. The students' first and last Curriculum Based Measurement Tests were compared to determine growth. The students were assessed using a set of standardized tests that only took an average of three minutes to complete. All of the students in each grade level were assessed using the Curriculum Based Measurement (CBM). The students who

scored in the lowest five percent were selected to receive the Early Success reading intervention.

Data Collection

The data consisted of scores obtained from AIMSweb testing which was administered three times during the year. The tests were administered at the beginning, middle, and end of the year. Only the beginning and end of the year tests were used to determine growth. The students were tested by trained school system employees. The students' teachers were not allowed to administer the tests to eliminate bias. The students were tested over fluency, letter naming, letter sounds, phoneme segmentation, and nonsense words.

CHAPTER IV

Results

Research Questions

Research Question 1: Do students who receive reading intervention make measurable progress between the beginning and end of the year AIMSweb tests?

Null Hypothesis 1: The Null Hypotheses 1 stated that there would be no statistically significant difference between the beginning and the end of the year AIMSweb tests. An independent samples t-test was conducted to assess the intervention group's growth between the Fall and Spring (2011-2012) AIMSweb tests. As shown in Table 5, the results indicated that the Spring AIMSweb fluency scores ($M = 94.66$, $SD = 6.65$) were significantly greater than the Fall AIMSweb fluency scores ($M = 70.65$, $SD = 14.31$), $t_{(14)} = 6.28$, $p = 0.0001$. Students who received the Early Success intervention showed an average mean growth of 24.01 between the Fall and Spring AIMSweb tests.

Table 5

Fall-Spring Early Success Reading Fluency Comparison

School Year 2011 – 2012	N	Mean	Standard Deviation	p-Value
Fall Fluency Scores	14	70.65	14.31	0.0001
Spring Fluency Scores	14	94.66	6.65	0.0001

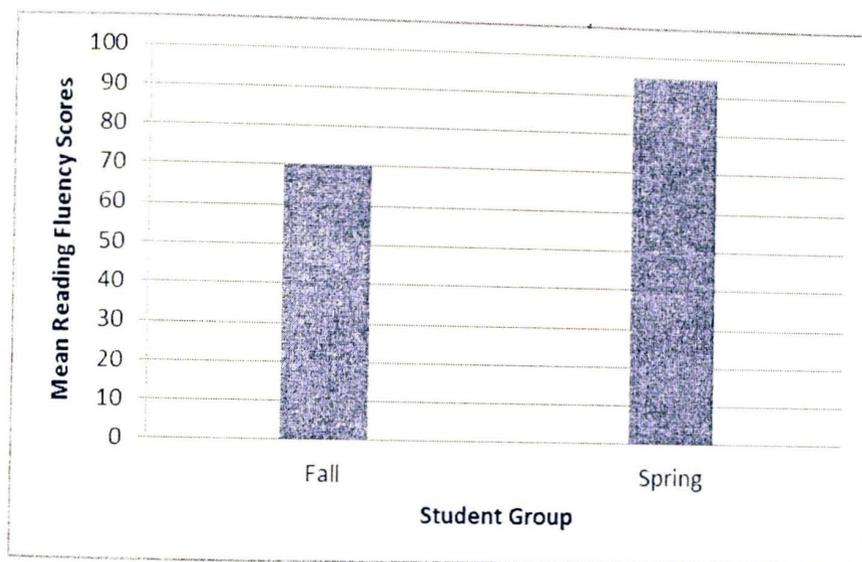
$p < 0.05$

This is visually represented in Figure 1 which shows the Early Success intervention group's average mean growth between the Fall and Spring AIMSweb tests. The 95%

confidence level for the mean difference between the two tests had an interval of -32.274 to -15.755. The results indicated that the students did make statistically significant progress between the fall and spring assessments. Therefore, because the p-value was less than the alpha level, Null Hypotheses 1 was rejected at the 0.05 level of significance.

Figure 1

Fall-Spring Early Success Reading Fluency Comparison



Research Question 2: Do students who receive reading intervention make more measurable growth than their peers who did not receive reading intervention?

Null Hypothesis 2: Null Hypotheses 2 stated that there would be no statistically significant difference between the students who received the reading intervention and those not receiving reading intervention on the AIMSweb tests.

An independent samples t-test was conducted to assess the intervention group's average mean growth compared to the average mean growth of the non-intervention group. As shown in Table 6, the results indicated that the mean rate of improvement in the reading intervention group ($M = 24.01$, $SD = 14.31$) was not significantly greater than the mean rate of improvement for non-intervention students who were equally matched ($M = 16.67$, $SD = 7.16$), $t_{(14)} = 1.57$, $p = 0.14$.

Table 6

Early Success-Non-Intervention Reading Fluency Comparison

Group	N	Mean	Standard Deviation	p-Value
Early Success	14	24.01	14.31	0.14
Non-Intervention	14	16.67	7.16	0.14

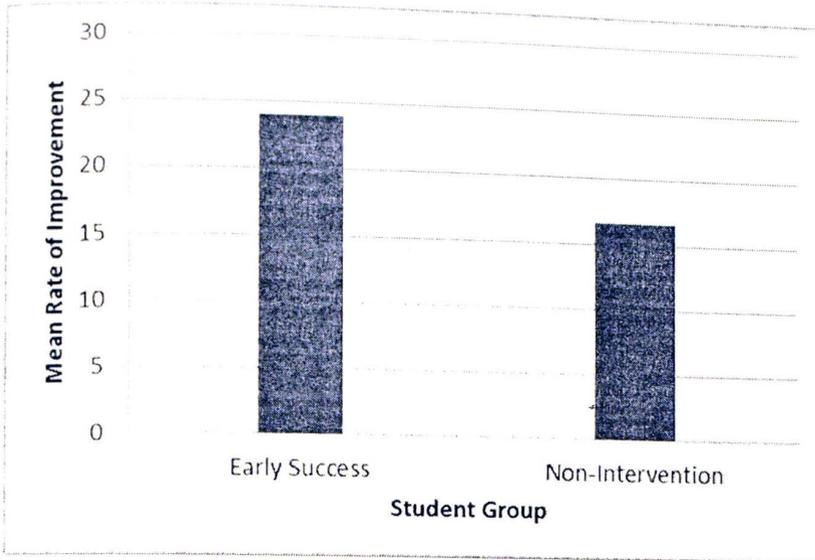
$p < 0.05$

Although on average the reading students who received the Early Success intervention had an average mean growth of 7.34 more in reading fluency than the sample group of non-intervention students, the difference was not statistically significant. The 95% confidence level for the mean difference between the two groups had an interval of -2.744 to 17.430. Therefore, based on the p-value (0.14), the Null Hypothesis 2 was accepted at the 0.05 level of significance.

Figure 2 shows a visually representation of the intervention group's average mean growth compared to the average mean growth of the non-intervention group.

Figure 2

Early Success-Non-Intervention Reading Fluency Comparison



CHAPTER V

Summary, Implications, and Conclusions

Summary

The data was analyzed to determine whether the Reading Intervention Program early Success indicated that the program had a significant effect on students reading test scores. Research has indicated that the most important elements of an effective reading program are phonemic awareness, phonics, fluency, vocabulary, and text comprehension (National Reading Panel, 2000).

One purpose of this study was to assess whether students who received reading intervention made measurable growth. A second purpose of the study was to determine whether there was a significant difference in growth between students who received reading intervention and those of similar characteristics who did not. As shown in Table 5 and Figure 1, the fall reading fluency scores were compared to the spring reading fluency scores. The mean fall fluency score was 70.65. The mean spring fluency score was 94.66. The average rate of improvement over the year was 24.01. The average rate of growth from the fall to the spring test was statistically significant.

The purpose of this study was also to assess whether students who received reading intervention made more measureable growth compared to their counterparts who did not receive reading intervention. As shown in Table 5, the intervention group made an average rate of improvement of 24.01. As shown in Table 6 the non-intervention group made an average rate of improvement of 16.67. Though the intervention group made an average rate of improvement of 7.34 more than the non-intervention group, the difference was not statistically significant.

Implications of the Study

Though the data from the study did not reflected statistically significant growth when comparing the intervention and the non-intervention group, it is likely the school will continue with the program. Both the intervention and non-intervention group demonstrated growth, but the intervention group reflected a greater amount of growth for the overall year. The intervention group's growth between the Fall and Spring AIMSweb tests was found to be statistically significant. This is especially important because the students who received the intervention were considered the lowest in the grade level and the most in need of help. The first null hypothesis that there would be no significant difference in growth between the beginning and the end of the year was rejected. The second null hypothesis that there would be no significant difference between the students who received the reading intervention and those not receiving the intervention on the AIMSweb tests was accepted.

Although the intervention group's growth was not significant in comparison to the non-intervention group, the students who received intervention did make growth throughout the year. The results do help support the fact that students who are struggling can make improvements if they are given intensive intervention.

The most important elements of an effective reading program should include phonemic awareness, phonics, fluency, vocabulary, and text comprehension (National Reading Panel, 2000). The Early Success reading program used with the intervention group contained these components. The results of the data showed the growth the intervention group made from fall to spring was statistically significant. This could provide support that the literature is correct when suggesting an intervention group

should consist of phonemic awareness, phonics, fluency, vocabulary, and text comprehension.

Pullen, Tuckwiller, Ashworth, and Lovelace (2011), suggested that the majority of the words students learn are from conversations they have had with their peers and parents. It was also suggested that students who had less exposure at home to broad vocabulary and good reading practices would more likely struggle in reading at school. According to Sticht (2011), literacy is built upon what they hear and say while children are growing, and the interactions between parent and child before school had a significant impact on later reading ability. It is usually accepted that students from low income families struggle more than students from middle or high income families. This was not seen in students given the intervention. The intervention group consisted of an equal number of students who received free or reduced lunches and students who paid full price.

Conclusions

The first Research Question asked, “Do students who receive reading intervention make measurable progress between the beginning and end of the year AIMSweb tests?” The data indicated that the students who received reading intervention did make statistically significant progress between the fall and spring AIMSweb tests. Based upon the data, the Null Hypothesis that there would be no statistically significant difference in growth between the beginning and the end of the year tests was rejected. This is important to the education community. Teachers are always looking for ways to help their students improve academically.

The second Research Question asked, “Do students who receive reading intervention make more measurable growth than their peers who did not receive reading intervention?” The data indicated that the students who received reading intervention made more measurable growth than their peers who did not receive reading intervention. Though the intervention group made more measurable growth, it was not statistically significant. Based upon the data, the Null Hypothesis that there would be no statistically significant difference between the students who received reading intervention and those not receiving reading intervention on the AIMSweb tests was accepted.

Though the data did not indicate any statistically significant growth when comparing the intervention group to the non-intervention group, the researcher would encourage the school to continue to use the Early Success intervention program. The students who were identified as struggling and received intervention made a statistically significant amount of growth between the fall and spring AIMSweb tests. When trying to help struggling students, the teacher wants to use a program that will show results. The Early Success program helped the intervention students make growth.

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APPENDICES

APPENDIX A

Letter of Approval from the Austin Peay State University

Institutional Review Board

Date November 21, 2012

RE: Study number _12-071_____

Dear Brooke Brown,

Thank you for your recent submission to the IRB. We appreciate your cooperation with the human research review process.

Congratulations! This is to confirm that your proposal has been approved and that your study is exempt from further review by the APIRB. Exemption is granted under the Common Rule Subpart D:4b; existing data recorded in such a way identity of children cannot be determined directly or indirectly by investigator, and the study poses minimal or no risk to students if their identify is inadvertently obtained.

You may conduct your study as described in your application, effective immediately.

Please note that any changes to the study have the potential for changing the exempt status of your study, and must be promptly reported and approved. Some changes may be approved by expedited review; others require full board review. If you have any questions or require further information, you can contact me by phone (931-221-6106) or email (shepherd@apsu.edu).

Again, thank you for your cooperation with the APSU IRB and the human research review process. Best wishes for a successful study!

Sincerely,

Omie Shepherd

Omie Shepherd, Chair
Austin Peay Institutional Review Board

Cc: Dr. Gary Stewart

APPENDIX B

Letter of Approval

Director of County Board of Education



DAVIDSON COUNTY BOARD OF EDUCATION

Danny L. Weeks, Ed.D., Director of Schools

817 North Charlotte Street

Dickson, TN 37055

Phone: 615-446-7571 – Fax: 615-441-1375

Email: dweeks@dcbe.org

47

01 November 2012

Ms. Brooke Brown
Stuart Burns Elementary

Dear Ms. Brown:

Please accept this letter confirming permission to conduct your Ed.S. project as outlined in your request in the fall of 2011.

Upon completion of your project we would request that you would submit a copy of your work to my office. If I may be of further assistance, or provide additional information, please do not hesitate to contact me.

Sincerely,

Dr. Danny L. Weeks
Director of Schools

DLW/rf