

The Effects of the *SOAR to Success* Reading Intervention Program on the Reading  
Comprehension and Fluency Skills of Below Level Fifth-Grade Students

By Alisha Welk

Submitted in Partial Fulfillment of the Requirements for the  
Degree of Master of Education

May 2017

Graduate Programs in Education

Goucher College

## Table of Contents

List of Tables	i
Abstract	ii
I. Introduction	1
Statement of Problem	2
Hypothesis	3
Operational Definitions	3
II. Review of the Literature	5
Importance of Reading Comprehension and Fluency	5
Struggling Readers and Reading Achievement	7
Reading Interventions and Strategies	9
Summary	12
III. Methods	14
Design	14
Participants	15
Instrument	16
Procedure	18
IV. Results	21
V. Discussion	23
Implications of Results	23
Theoretical Implications	25
Threats to Validity	25
Connections to the Literature	26

Implications for Further Research	28
Conclusion	30
References	31

## List of Tables

- |                                                                                               |    |
|-----------------------------------------------------------------------------------------------|----|
| 1. Means, Standard Deviations, and t-test Results for <i>QRI</i> Reading Comprehension scores | 21 |
| 2. Means, Standard Deviations, and t-test Results for <i>QRI</i> Fluency Scores               | 22 |

## Abstract

The purpose of this study was to determine the effectiveness of participation in the *SOAR* reading intervention program on below level fifth-grade students' comprehension and fluency skills compared to students who did not participate in the intervention program. The posttest used included both implicit and explicit questions from narrative and expository passages in the Qualitative Reading Inventory-5 (*QRI* -5). The *SOAR* group's (n = 8) mean score (Mean = 8.56, SD = 3.75) did not differ significantly from the control group's (n=9) mean score (Mean = 9.38, SD = 3.25) [t (15) = 0.48, p = .64]. Fluency was also assessed, and results were similar in that there was no significant difference in the mean scores of the two groups: *SOAR* group's mean (Mean = 85.11, SD = 24.8) and control group's mean (Mean = 91.40, SD = 17.21) [t (15) = 0.61, p = .55]. Although the results failed to reject the null hypothesis, several other benefits to participating in a reading intervention program were observed by the researcher. Further research on the effectiveness of reading intervention programs for struggling readers in intermediate grades should be continued in order to help students develop skills that are comparable to those of peers who are stronger readers.

# CHAPTER I

## INTRODUCTION

### Overview

There is no question that the most important thing a child does academically during his or her elementary school years is learn how to read and comprehend text. Success in school and beyond depends largely on the ability to read. In school, all subjects are tied to reading; writing, solving mathematical problems, spelling, science, and social studies all require strong reading skills in order to be successful. However, despite the importance of reading in our society, statistics continue to show that high percentages of students struggle with reading (Reed, Marchand-Martella, Martella, & Kolts, 2007). In elementary school, the primary years (from Kindergarten through second grade) focus on learning to read; this changes in the intermediate grades. Students are no longer taught how to read; they are expected to “read to learn.” After third grade, the emphasis on instruction in learning to read often begins to fade from instruction in the general education classroom, meaning students who do not read proficiently by the end of Grade 3 may face serious consequences in their academic achievement (Wanzek et al., 2013). Students who fall behind their classmates will continue to struggle throughout their remaining school year unless they receive additional instruction in reading through interventions or remedial reading programs.

Research consistently shows that early intervention for young struggling readers is crucial to future reading success. Unfortunately, extensive research does not exist when it comes to reading interventions for students in Grades 4 through 12. Research that was conducted indicates positive reading outcomes for older students when providing explicit instruction in (a) word study strategies to decode words, (b) word meanings and strategies for deriving the

meanings of unknown words, and (c) comprehension strategy instruction (Wanzek, Wexler, Vaughn, & Ciullo, 2010). However, most of the research conducted focuses on students in Grades 6 through 12. Typically, there is an underlying assumption that fourth- and fifth-grade students are more similar to secondary students than to elementary students (Wanzek et al., 2010). More research needs to be conducted on intervention use with struggling readers in Grades 4 and 5. It is necessary to determine appropriate methods to intervene with students in the upper elementary years before they reach the secondary grades and are then faced with a multitude of additional academic and social challenges (Wanzek et al., 2010).

One such intervention that can be used with upper elementary students is the *SOAR* program (Cooper, Boschken, McWilliams, & Pistochni, 2006). This research-based program focuses on small group instruction with struggling readers in Grades 3 through 8. The program focuses on explicitly teaching reading strategies that improve comprehension and overall fluency. The ultimate goal of this program is to move students out of the program as they master the necessary skills through readings and assessments. Although the researcher teaches in a school that uses this intervention program, it is used only with Tier 3 students, in other words, special education students who have been specifically designated as meeting requirements to receive a reading intervention program in addition to regular reading instruction. This researcher wondered whether the *SOAR* intervention would be successful with a broader range of low reading achievement students.

### **Statement of Problem**

The purpose of this study was to determine whether the addition of the *SOAR* reading intervention program would have an effect on the reading comprehension and fluency skills of fifth-grade students reading below grade level.

## Hypothesis

For this study, the null hypothesis was proposed. The researcher predicted that there would be no significant difference in the mean *Qualitative Reading Inventory (QRI)* (Leslie & Caldwell, 2011) reading comprehension scores and fluency scores of fifth graders reading below grade level who receive additional direct instruction through the *SOAR* intervention program along with regular classroom instruction in reading when compared to a control group of students who receive regular classroom instruction only.

## Operational Definitions

Reading comprehension is defined as student performance on the *Qualitative Reading Inventory (QRI) 5*. After reading two passages (one narrative and one expository), students were asked a set of eight questions for each passage. Questions asked were both explicit and implicit in nature; four questions of each type were asked. Explicit questions have answers that have been explicitly stated in the passage, whereas implicit questions require the student to use their background knowledge along with information from the text to answer the implicit questions. The reading comprehension score was the total number of explicit and implicit questions correctly answered out of the total number of questions asked.

Reading fluency is defined as being able to read text with proper speed, accuracy of the spoken word, and use of expression. Fluency is directly tied to comprehension. If a student can read quickly, smoothly, and with proper expression, he or she is more likely to have greater overall comprehension. Students were timed while reading the *QRI* passages. The researcher noted the total number of words read minus any errors. This number was then multiplied by 60 and divided by the number of seconds needed to read the passage which resulted in a words per minute score. This score was used to determine overall fluency as it compares to grade level

fluency expectations. The word per minute score was based off the average words per minutes from the two passages.

Below grade level students were determined from their scores on the *Scholastic Reading Inventory (SRI)* (Scholastic, 2006a). The *SRI* is a research-based, computer adaptive assessment designed to measure reading comprehension levels in students. The *SRI* is currently given to students in Grades 3 through 5 at the researcher's school. Students read several passages (both narrative and expository) and answer questions based on the information provided in the passages. A Lexile score is provided at the end of the assessment. This score is based on performance standards for each grade level: below basic, basic, proficient, and advanced. All students in the researcher's sample scored at the below basic reading level for fifth grade.

*SOAR to Success* is an intensive research-based reading intervention program that uses literature, comprehension strategies, and graphic organizers to accelerate growth in struggling readers. The program is designed for students in Grades 3 through 8 who are reading significantly below their grade level. The program uses both narrative and expository text that gets more complex as the student progresses through the program.

## **CHAPTER II**

### **REVIEW OF THE LITERATURE**

This literature review will discuss the importance of reading comprehension and fluency in relation to student success and achievement in the classroom. Section one will look at the importance of reading comprehension and fluency and how it impacts student achievement. Section two will describe characteristics of struggling readers and their lack of reading achievement. Section three will discuss reading intervention programs and teaching strategies that can assist with student success and achievement.

#### **Importance of Reading Comprehension and Fluency**

The basic definition of reading comprehension is the ability to read and understand text. In an educational setting, reading comprehension entails being able to correctly decode words in text while also being able to understand the words read. Having strong reading comprehension is not just a prerequisite for academic accomplishments but for lifelong achievement. Lyon (as cited in Reed et al., 2007) argues that reading at high levels is associated with continued academic success, significantly reduced risk for school dropout, higher rates of entering college, and finding successful employment. Reading comprehension, in turn, leads to overall literacy, which Hausheer, Hansen, and Dumas (2011) note is a goal both within and outside school, today and later in life, in further education, at work, and in leisure activities.

In order to reach those levels and goals, students need to start with basic reading comprehension and fluency in the classroom. Fluency and comprehension are woven into one other and should not be thought of as separate successes. Students who are able to decode words can be fluent readers, but they may have difficulties understanding what they've read. As noted by Melby-Lervag and Lervag (2014), two components are important for understanding written

text: the ability to decode and the ability to understand the linguistic content. Reading comprehension is the product of these two components; if either is deficient, reading comprehension suffers.

The first component, fluency, is the combination of the accuracy, speed, and verbal expression used by students while reading. The second factor, linguistic content, is basically the ability to understand the actual meaning of the words behind the written text. Both fluency and context work hand in hand. When students are unable to read the words, all of their time and focus is spent trying to decode and pronounce the word. This, in turn, leaves little chance to then understand the meaning of what was read, as these readers are struggling with simply pronouncing each word. Poor readers often spend a great deal of their cognitive resources on decoding and have little left for comprehension (Therrien, 2004). Understanding the meaning of words gives students the ability to put both pieces of comprehension together and become successful readers. Comprehension depends on understanding the meanings of between 90% and 95% of the words in text (Ritchey, Silverman, Montanaro, Speece, & Schatschneider, 2012).

The idea of comprehension becomes even more important in the intermediate grades. Students who continue to struggle with reading after third grade have particular challenges accessing the general education curriculum not only in reading but in other content areas where mastery of reading is often expected for building background knowledge and learning new information (Wanzek & Roberts, 2012). As students progress through their elementary years, reading becomes more complex and difficult. Students are required to read in all areas of their schooling, not just in language arts. Reading is required in math, science, social studies, and throughout the school day.

Once a student reaches third grade, reading is more focused on ‘reading to learn’ and not ‘learning to read.’ In the primary grades, students are given instruction on phonemic awareness, phonics, and fluency, basically ‘learning how to read.’ However, starting in third grade and beyond, the focus is now on ‘reading to learn.’ In upper elementary grades, teachers’ expectations increase for independent reading and learning by students, and instruction on learning how to read is deemphasized (Wanzek & Roberts, 2012). When students have reached this stage, they are focusing on vocabulary building and text comprehension strategies to help them gather meaning from the text (Reed et al., 2007). If students are still struggling with ‘learning how to read’ at this point, they will begin falling behind their peers.

### **Struggling Readers and Reading Achievement**

In schools across the country, students are struggling to read fluently and comprehend the text. Many students are reading at below basic levels for their age and grade level equivalents. Despite the importance of reading in our society, statistics continue to show that high percentages of students struggle with reading (Reed et al., 2007). The National Assessment of Educational Progress (NAEP) reports that only 1/3 of students at both the fourth and eighth grade are reading at or above a proficient level in our nation. Among fourth graders, 31% are reading at a below basic level, and 24% of eighth graders are also reading at a below basic level (NAEP Nations Report Card, 2015). These statistics have remained the same over the last ten years, with no statistically significant growth changes. Students in grades four through twelve manifest a wide range of reading difficulties, from students who demonstrate reading achievement just below grade level to students who demonstrate reading achievement more than two grade levels below expectations (Wanzek et al., 2013).

Students who read below grade level find it difficult to achieve success throughout their school careers without assistance from teachers or intervention programs. Students who enter the upper grades as poor readers will continue to struggle throughout their schooling (Wanzek & Roberts, 2012). As students move to higher grades, texts become more complex and reading difficulties seem to increase for some, while in others difficulties seem to suddenly appear at this stage. As early as fourth grade, students are presented with the supplementary challenge of transition from reading and understanding narrative text to reading and understanding content area expository text (Wanzek et al., 2010). Many poor readers are stuck in the ‘learning how to read’ stage and are not yet prepared for higher level texts; they are still focused on decoding words and increasing their fluency. They are nowhere near ready to focus on the more difficult comprehension techniques required to understand meaning. Chall and Jacobs (1983) show that many low income third graders reading at grade level experience a sudden drop in normative reading scores by the fourth grade, referring to this phenomenon as the “fourth grade slump,” and indicating not that students go ‘backwards’ in reading, but instead that they fail to thrive and cannot meet grade level expectations (Wanzek et al., 2010).

Reading difficulties can also occur for other reasons. Some students are identified as having special needs with a specific learning disability, while others simply lose interest in reading (mostly boys). Still other students’ reading levels are affected by language barriers, their home lives, or even cultural practices. Research has also shown that reading difficulties occur more in students in lower socio-economic levels than other classes. Children from low-income families are especially at risk for word identification problems (Vernon-Feagans et al., 2012). Each year, there are more and more children living under the national poverty level, a circumstance that can affect their reading levels. Children who live in poverty in rural settings

appear to be at particular risk for reading failure because of a lack of access to services (Vernon-Feagans et al., 2012). With all of these factors in place, it becomes much more difficult for the classroom teacher to discern what to teach and how to teach the strategies to struggling readers. A fundamental issue for teachers of students with reading difficulties in grade four and higher is the availability of information regarding how much instructional emphasis should be provided for word reading activities and meaning-based activities (Wanzek & Roberts, 2012).

Knowing where to begin is a difficult task for any teacher, but no matter the results, students with reading difficulties must be taught the same strategies as good readers have in order to succeed. Successful instructional strategies consist of the following components: small, interactive group instruction, direct questioning and responses, breaking tasks into smaller component parts, designating extended periods of time focusing on reading, and receiving feedback (Hausheer et al., 2011). In addition to instructional strategies, intervention programs can help struggling reading become successful readers and gain confidence. Intervention programs include vocabulary instruction, comprehension instruction, and fluency instruction. Teachers, reading specialists, and administrators need to determine which programs would best meet the needs of their students.

### **Reading Interventions and Strategies**

Once students have been identified as struggling readers, teachers and administrators need to make a decision on the next steps. Will the student receive additional support outside the classroom, inside the classroom, in an intervention, and/or in a before-school program? This instruction is in addition to the regular classroom instruction the student receives. Struggling readers need this additional time in order to become stronger readers. Leaders in the field of literacy intervention suggest many students would fail to make adequate progress toward

improving overall reading fluency without additional effective intervention outside of typical class-wide instruction (Mong, Mong, Henington, & Doggett, 2012). The idea behind a reading intervention is to improve a student's reading by helping him or her with decoding (phonemic awareness and phonics), fluency (speed and accuracy), and text comprehension (vocabulary and text meaning). The National Institute for Child Health and Human Development (NICHD, 2000) found five areas of instruction critical to the success of beginning readers and those in need of remediation. These areas include phonemic awareness, phonics, fluency, vocabulary, and text comprehension (Reed et al., 2007).

When considering various reading interventions, one thing to consider is how the teaching will occur. Most students learn best from explicit and systematic instruction. A good reading intervention program should have instruction that is explicit, in that the teacher models and demonstrates the skills and strategies needed with a gradual release. It should also be systematic, which means the instruction is sequenced. Previously learned skills are practiced and new concepts are then introduced and meshed with those previously learned skills. Research in the area of reading demonstrates the effectiveness of explicit and systematic instruction in vocabulary and text comprehension strategies (Reed et al., 2007). Students should also be given plenty of practice time with feedback so they can ultimately complete work independently with less explicit instruction. In addition to the above plan, teachers and administrators are required to follow federal guidelines when determining an intervention program. Federal guidelines on Response to Intervention require that teachers employ research-based interventions (Lipson & Wixson, 2012).

When deciding on an intervention program, administrators and teachers should check the research. However, the majority of research available is directed at early intervention programs;

there is not as much available for use with older students. Considerably less is known about effective interventions beyond the primary grades (Lipson & Wixson, 2012). A synthesis of 20 years of research conducted by Wanzek et al. (2010) found that intervention practices that prove affective for younger students may be less so for older students. They found that the majority of outcomes for the comprehension and vocabulary treatments yielded effects that were moderate to large in size. This provides support for the influence of vocabulary and comprehension interventions on improving students' understanding of text (Wanzek et al., 2010). Further research (Reed et al., 2007) shows statistically significant gains from pre- to posttesting on all indices of reading function using a reading intervention program used for fourth grade students. In addition to vocabulary and comprehension, studies have also been conducted on the importance of interventions that target fluency. One such strategy to increase fluency is repeated readings. Research indicates that repeated reading may also improve students' ability to fluently read and comprehend new passages (Therrien, 2004). What all of the research suggests is that reading intervention programs beyond grade three can be of value to upper elementary students.

Research has shown that effective intervention programs for upper elementary students are those that have explicit and systematic instruction and contain strategies that assist with fluency and/or vocabulary comprehension. Two such programs that fall into this category are *Reading Success* and *SOAR to Success*. *Reading Success* is an intervention program that focuses on comprehension strategies with additional instruction in vocabulary building. Teachers demonstrate comprehension strategies along with vocabulary, conduct scaffolding practice, and include application of these strategies with a variety of independence and review (Reed et al., 2007). Some of the comprehension skills taught are identifying main idea, making inferences, paraphrasing, asking questions, and identifying story structure. All of these skills are necessary

to become a successful reader. When systematic and explicit instruction in text comprehension is provided, it should include comprehension monitoring, graphic organizers, instruction on story structure, question answering and generation, inferences, and summarization of text (Reed et al., 2007). All of these skills are touched upon in the *Reading Success* program. The skills are taught through explicit instruction and are sequenced with appropriate scaffolding. Previously taught skills are then reviewed on daily basis with plenty of practice so students can internalize the strategies to be used in independent reading. Various levels are available throughout the program as students grow and excel.

A second noteworthy intervention program is *SOAR to Success*. It is a research-based program that uses small group instruction for struggling readers in grades three through eight. It focuses on the use of four reading strategies to improve students' reading comprehension and overall fluency: summarizing, clarifying words, questioning, and predicting. Instruction on the four strategies is provided through reciprocal teaching, meaning the teacher and student take turns being the teacher and modeling the strategies. Systematic and explicit instruction should include the use of multiple-strategy teaching techniques (e.g., reciprocal teaching) that emphasizes continued teacher-student interaction during instruction (Reed et al., 2007). This program also incorporates instruction on decoding and how to use context clues to help determine meaning of words thus working to improve overall fluency. As with all other interventions, the goal is move students out of the program once they demonstrate mastery through ongoing assessments.

### **Summary**

Overall, comprehension includes the ability to not only decode words in written text, but also to understand and make meaning of written text. In order to be successful in reading,

students need to be explicitly taught in a systematic manner. However, even after detailed instruction, many students arrive in the upper elementary grades still struggling to read fluently, decode words, and make meaning of text. Research reports that from 25 to upwards of 60% of older readers are unable to demonstrate mastery of the most basic reading skills (Flynn, Zheng, & Swanson, 2012). Because of statistics like these, there is a demonstrated need for reading interventions in most elementary schools. Not much research has been done with older students, but the research that has been conducted has been promising. Research for students with reading difficulties and disabilities in the upper elementary grades suggests: (a) instruction in comprehension strategies for application before, during, and after reading produces increased comprehension; (b) mixed results for fluency interventions; (c) limited evidence for the effects of vocabulary instruction; and (d) multi-component interventions demonstrate promise for increasing student outcomes (Wanzek et al., 2010). Whichever intervention program is chosen by a school or district, administrators and teachers should familiarize themselves with the many available programs and choose one based on scientific research and evidence, the needs of the students, and the time available for instruction. Reading is one of the most important things students need in their lives, and teachers can make the difference for those students who struggle. With time and explicit and systematic instruction, struggling readers can become successful and excel in both school and life.

## CHAPTER III

### METHODS

The purpose of this study was to determine whether the addition of the *SOAR to Success* reading intervention program would have an effect on the reading comprehension and fluency skills of fifth-grade students reading below grade level.

#### Design of the Study

This study was an experimental, posttest-only control group design. Although the students did not take the post-test measure as a pretest, the researcher used students' Lexile scores to determine that the groups had no significant differences. Lexile scores were compared using an independent samples t-test. There was no significant difference between the mean Lexile score of the control group (Mean = 549.00, SD = 177.66) and the experimental group (Mean = 599.25, SD = 107.70) [ $t(15) = 0.69, p > .05$ ]. The researcher decided to use the Lexile scores because they provide information about reading comprehension skills and were already available. It would have taken too much instructional time to administer the pretest individually to 17 students.

The students were in the researcher's reading class and were randomly assigned to one of two groups, the treatment or the control group. This study compared the *QRI* posttest scores of students who received *SOAR* instruction in addition to traditional reading instruction to the scores of students who only received traditional instruction in reading. The independent variable was whether or not the students received direct instruction of the *SOAR to Success* reading intervention program. The dependent variable was the reading comprehension and fluency scores students received on the posttest.

## Participants

The subjects in this study were fifth grade students enrolled in a suburban elementary school in Maryland. At the study school, 70% of students receive free or reduced meals with 9% receiving special education services. Of the entire school population, 46% are African American, 31% are Caucasian, and 9% identify as Latino. The school's mobility rate is 18%, with 9% entering and 9% withdrawing during the school year. The total population is 53% male and 47% female (Maryland Report Card, 2016).

The 17 participants (another student was going to be in the study, but he withdrew from the school before the intervention was started) were all enrolled in the researcher's fifth grade reading class and were all reading below grade level, as per the *Scholastic Reading Assessment (SRI)* (Scholastic, 2006a). The *SRI*, a computer adaptive research-based assessment, is given to students in Grades 3 through 5 at the researcher's school. The *SRI* assesses students' ability to identify details in a passage, identify cause/effect relationships, draw conclusions, and to make generalizations and comparisons. Students read several passages which include both literary and expository texts. Passages vary in length from only three sentences up to ten sentences, depending on students' reading levels. After reading each passage, a student is asked to answer one question about the passage. The final result is a score that reflects each student's reading level and overall comprehension. Scores are based on a four tier performance level: below basic, basic, proficient, and advanced. All participants in this study fell into the below basic category on their most recent *SRI* assessment.

Students were randomly assigned to either a control group or a treatment group using a website that uses random number calculators to assist in determining random groupings (Graphpad, n.d.). Participants' ages ranged from 10 to 11. The control group consisted of four

females and four males with six African American and two Caucasian students. The treatment group consisted of four females and five males with five African American and four Caucasian students.

### **Instrument**

The instrument used was the *Qualitative Reading Inventory-5 (QRI-5)* (Leslie & Caldwell, 2011). The *QRI-5* is an informal assessment that is administered to students individually. This assessment provides information about (1) conditions under which students can identify words and comprehend text successfully and (2) conditions that appear to result in unsuccessful word identification or comprehension (Leslie & Caldwell, 2011). Like other informal reading inventories, the *QRI-5* provides graded word lists and numerous passages designed to assess the oral and silent reading and listening ability of students from the pre-primer 1 through the high school levels. While the *QRI-5* uses traditional percentages to determine independent, instructional and frustration levels, students' scores are interpreted only in regard to the individual and not to any norm group (Leslie & Caldwell, 2011).

The *QRI-5* was administered to measure the reading comprehension level and fluency of the participants after the intervention period. The word lists were not used during the posttest assessment. Students in both the control and treatment group were given two level four (fourth grade) passages to read, one narrative and one expository. Level four passages contain anywhere from four to six paragraphs and have an average of 306 words. Students read the passages aloud while the researcher timed how long it took the students to complete the passage. Errors in reading were noted by the researcher but not corrected. The final time and the number of words read correctly were used to determine overall fluency as it relates to grade level. The researcher noted the total number of words read minus any errors. This number was then multiplied by 60

and divided by the number of seconds needed to read the passage. This provided a words per minute score, which was then compared to Hasbrouck and Tindal's (2006) oral reading fluency data. The words per minute score was based off the average words per minute from the two passages. Students were then asked a total of eight short answer questions, four implicit questions and four explicit questions, to arrive at a raw score. Questions were asked orally by the researcher, and students answered the questions orally.

The *QRI-5* manual provides information on both reliability and validity of scoring. Reliability is broken into three categories: inter-scorer reliability, alternate-form reliability, and reliability of diagnostic judgments. Although different examiners score the assessments, inter-scorer reliability can be achieved when they are trained using the *QRI-5* guidelines. In reliability studies, the reliability of scoring answers to comprehensions questions was 98% for both explicit and implicit items (Leslie & Caldwell, 2011). Alternate-form reliability shows the degree of consistency in comprehension scores between two passages of the same readability. The alternate-form reliability was always above .80, and 75% were above .90 (Leslie & Caldwell, 2011). Two judges independently scored data from 108 children to determine the reliability of diagnostic judgments. The judges agreed on the diagnostic category of the students' abilities 87% of the time (Leslie & Caldwell, 2011). Both concurrent and construct validity resulted in positive correlations. Positive correlations between the *QRI* and measures such as the *Wisconsin Knowledge and Concepts Evaluation*, the *Iowa Test of Basic Skills*, the *Woodcock Reading Test*, and the *Measures of Academic Progress* were all positive and statistically significant (Leslie & Caldwell, 2011).

Pre-intervention comprehension data was reported with Lexile score of participants. Students had taken the *SRI* in mid-January 2017, two months prior to the start of the intervention.

The *SRI* is a computer-adapted exam that measures overall comprehension and grade level reading equivalents. Results from independent samples t-test showed no significant differences between the groups. Pretest fluency data was not collected, as all participants were reading below grade level and testing would have incorporated more time than allotted for the study.

### **Procedure**

None of the students in the study had participated in the *SOAR to Success* intervention program in the past three years. The treatment group met with the researcher for a total 35 minutes a day during the regular self-sustained silent reading (SSR) time. During this time in the classroom, students are silently reading at their desks. The treatment group met with the researcher for a total of six weeks.

During the study, the treatment group students read the first six books from the intervention program. Based on students' *SRI* scores and the fact that all students must start at the same place, the researcher used the Level 4 *SOAR to Success* intervention program which is the equivalent of fourth grade. The books increase in difficulty as the program progresses. The first three books have a small amount of print per page, the pictures directly support the text, and they have a clear story line (Cooper et al., 2006). The next three books in the program still have a small amount of text along with simple story lines, but the text now appears in short paragraphs.

The first session was an introductory lesson to the program and discussed how each lesson would be taught. During the first meeting, students were told that they would be participating in a reading intervention program to help them become stronger readers. They were told that, at the end of the program, they would be given an assessment to determine whether the program was successful.

Each lesson consisted of a detailed instructional plan with a script to follow. The entire lesson had five separate components: revisiting, reviewing, rehearsing, reading and reciprocal teaching, and responding/reflecting. The revisiting portion is a brief five-minute period when the researcher and students discuss books they are reading outside of school. They also spend a few minutes rereading a section of a book read during the previous day's lesson. This assists with students' fluency and helps develop comprehension. The next step in the lesson was a five-minute reviewing period. The students would summarize the previous day's story and discuss strategies used while they were reading. The idea behind this portion of the lesson is to help develop comprehension and students' ability to recall information. The third portion of the lesson consisted of rehearsing for up to ten minutes. During this piece, students did a quick preview of what they were about to read. The researcher would have students make predictions or complete a graphic organizer on what they already knew, what they wondered, and what they have learned (K-W-L chart). By doing this, students are given a purpose for reading and building background knowledge. The fourth step in the lesson encompassed up to fifteen minutes. During this time, students read the book either silently or aloud and discussed strategies to use during reading. The text was chunked, and students would retell what was just read. Once the reading was complete, the students focused on the four main strategies embedded into the *SOAR to Success* program: summarize, clarify, question, and predict. These strategies were modeled by the researcher and then by students.

As the program progressed, the researcher began to have the students do the modeling of the strategies; this is the basis of reciprocal teaching. The final five minutes of each lesson consisted of responding and reflecting. During this time, the participants completed graphic organizers or written responses to the reading they had completed. Students would then reflect

on their strategies they used during the lesson, and we would discuss and share their thoughts. This five-step process continued throughout the six-week study.

After the six-week time frame, both groups were individually administered the *QRI-5* by this researcher. It took approximately ten minutes per student to complete reading the two passages and answering the questions. The mean reading comprehension scores and the mean fluency scores were compared with an independent samples t-test.

## CHAPTER IV

### RESULTS

The purpose of this study was to investigate the effect of the *SOAR* reading intervention program on the reading comprehension and fluency skills of below level fifth grade students. Comprehension and fluency skills were assessed using the *QRI-5*. The overall comprehension score was the total number of questions answered correctly (out of sixteen total) after reading two different passages, one narrative and one expository. The fluency score was an average of correct words per minute (CWPM) from the two passages.

The mean *QRI* reading comprehension score of the *SOAR* group (Mean = 8.56, SD = 3.75) was not significantly different than the mean reading comprehension scores of the control group (Mean = 9.38, SD = 3.25) [ $t(15) = 0.48, p = .64$ ]. See Table 1. The mean *QRI* fluency score of the *SOAR* group (Mean = 85.11, SD = 24.38) was not significantly different than the mean fluency score of the control group (Mean = 91.40, SD = 17.21) [ $t(15) = 0.61, p = .55$ ]. See Table 2. Consequently, the null hypothesis that there would be no significant difference in the mean *QRI* reading comprehension scores and fluency scores of fifth graders reading below grade level who receive additional direct instruction through the *SOAR* intervention program along with regular classroom instruction in reading compared to a control group who receive regular classroom instruction only failed to be rejected.

Table 1  
*Means, Standard Deviations, and t-test Results for QRI Reading Comprehension scores*

<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>t-statistic</b>
<i>SOAR</i>	8	8.56	3.75	0.48 (NS)
Control	9	9.38	3.25	

NS = non-significant at  $p \leq .05$

Table 2  
*Means, Standard Deviations, and t-test Results for QRI Fluency Scores*

<b>Group</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>t-statistic</b>
<i>SOAR</i>	9	85.11	24.38	0.61 (NS)
Control	8	91.40	17.21	

NS = non-significant at  $p \leq .05$

## **CHAPTER V**

### **DISCUSSION**

The purpose of this study was to investigate the effect of the *SOAR* reading intervention program on the reading comprehension and fluency skills on below level fifth-grade students. The null hypothesis that there would be no significant difference in the mean *QRI* reading comprehension scores and fluency scores of fifth graders reading below grade level who received additional direct instruction through the *SOAR* intervention program along with regular classroom instruction in reading compared to a control group who received regular classroom instruction was retained. There was no significant difference between the two groups after the intervention.

#### **Implications of the Results**

The results suggest that participation in the *SOAR* reading intervention program did not have an effect on comprehension and fluency skills of participating students compared to those students who did not participate in the program. Findings of this study suggest that student participation in an intervention program alone may not provide enough instruction to assist with overall achievement in reading comprehension and fluency.

Although there were no statistically significant differences in the outcome variables, the researcher did note several benefits from the participation in the *SOAR* intervention program. All of the students in the experimental group enjoyed working with the researcher over the six-week timeframe. The students enjoyed having more individualized attention from the researcher and were actively engaged during the lessons. As the lessons progressed, students were participating more in small group discussion and were eager to read the stories. Students were eager to answer questions and worked cooperatively with each other. Part of the *SOAR* program involves

discussing books students are reading outside of the classroom. After several lessons, some students asked to take books home from the researcher's classroom library so they could have a book to share at one of the next meeting times. The students requested to continue the program even after the six-week experiment ended.

The same students who participated in the *SOAR* program were also more eager to participate in whole group discussions and were more confident when responding during regular classroom reading discussion. They were more willing to raise their hands in response to questions asked after reading various texts in the classroom. This, in turn, prompted students who did not participate in the program to become more active during traditional reading instruction. As the non-*SOAR* students saw more students participating and willing to take a chance, they also began to gain confidence in their responses.

Educators should consider several factors when choosing to use a reading intervention program in their own classrooms. Students should be clearly identified as to their need for the intervention and whether they have participated in programs in previous years. If a student has been a part of previous intervention programs with no success, perhaps another method of assistance should be planned. Educators should also consider the group size when implementing an intervention program. The research conducted on *SOAR* has shown the most effective instruction occurs with groups of five to seven students; the researcher had a group of eight students. Lastly, educators should consider the time spent on the intervention. Most research-based intervention programs can last anywhere from twelve weeks to the entire school year. The researcher's particular study lasted for six weeks.

## **Theoretical Implications**

Although the results do not support the theories about the effectiveness of explicit and systematic small group instruction in vocabulary and text comprehension (Reed et al., 2007), the limitations in the study, to be discussed below, likely had a significant impact on the results. Consequently, the results should not be considered as proof that this type of intervention is ineffective.

## **Threats to Validity**

Threats to external validity exist due to the confines of sample size. The sample size was limited to seventeen participants, which is small. Small sample sizes reduced the statistical power in the study.

Although students were randomly assigned to either the control or experimental group, the students were conveniently in the researcher's reading group and were below grade level readers in the fifth grade. Results cannot be generalized to students at all grade levels or children of all ability levels.

Threats to internal validity were also present in the study. Due to various constraints in the study, many aspects of the intervention did not match the recommended procedures. Traditional intervention programs tend to last for several months at a time and in much smaller groups. The *SOAR* program is structured to last up to a total of 20 weeks. Lessons provided in the program include 18 books, with each book and assessment taking six to seven days to complete. Group sizes are recommended to consist of three to seven students. This study lasted for only six weeks, only five books were completed, and the group consisted of eight students.

Throughout the six-week time frame, some lessons were missed due to student absences, testing schedules, and a small weather-related event, which resulted in the loss of three lessons in a row.

### **Connections to Previous Studies/Existing Literature**

Successful instruction strategies contribute to the improvement of reading skills (Hausheer et al., 2011). There is a significant body of literature that suggests a program like *SOAR* could be an effective intervention. The *SOAR* program incorporates several strategies to assist with overall comprehension and fluency. These strategies include decoding of words, explicit and direct instruction, vocabulary, and comprehension. Research has indicated positive reading outcomes for older students when teachers provide explicit instruction in (a) word study strategies to decode words, (b) word meanings and strategies for deriving the meanings of unknown words, and (c) comprehension strategy instruction (Wanzek et al., 2010). This shows the importance of intervention programs that focus on vocabulary and comprehension to help struggling readers achieve.

The National Institute for Child Health and Human Development (NICHD, 2000) reported that effective reading instruction is best acquired through systematic and explicit instruction. This is exactly what the *SOAR* intervention program does: provides instruction that is explicit in nature with plenty of teacher modeling and time to demonstrate mastery. In addition, the *SOAR* program is systematic. Instruction builds upon prior knowledge, and lessons progress from simple to more complex. Research reveals that teaching explicit, systematic reading comprehension strategies to fourth graders is likely to increase reading comprehension skills and performance (Reed et al., 2007). Although students in the study were at a fifth grade level, they were all reading at a fourth grade level or below, which is comparable to the aforementioned research.

In addition, the United States Department of Education identified characteristics of effective reading interventions, including small group size of three to six students, daily intervention for at least 30 minutes, intervention that addresses all five essential components of reading instruction, and instruction which is explicit and direct (Woodward & Talbert-Johnson, 2009). The *SOAR* intervention program used in the study focuses on small group sizes, 30-minute lessons, components of reading instruction, and teaching that is explicit and direct.

Based on the literature, it was anticipated that the students who participated in the *SOAR* intervention would show improvement on comprehension and fluency measures. Unfortunately, results of the current study do not provide statistical evidence to support the effectiveness of the *SOAR* reading intervention. The null hypothesis failed to be rejected. However, when considering the limitations of the study, the results should not be interpreted as refuting the literature on successful interventions. Rather, the results suggest that if the *SOAR* program is in place over a relatively brief time frame (e.g., six weeks) and if group sizes are larger than recommended, significant benefits in terms of reading comprehension and reading fluency are not likely going to be evident.

Moderate evidence has been provided for including opportunities for extended discussion and interpretation of text meaning in instruction and for increasing student motivation and engagement in literacy learning (Wanzek et al., 2013). This was clearly evident in the researcher's informal observations of participants during and after the study. Students were enthusiastic, engaged, and motivated throughout the lessons conducted during the study and also during regular classroom instruction. Although they were disappointed to see the study come to an end, they continued to show the increased enthusiasm, engagement, and motivation that was present during the study.

## Implications for Future Research

The majority of research conducted on students with reading difficulties occurs with students in Kindergarten through Grade 3. Not as much research has been conducted on the intermediate grades; however, this is where educators are finding large populations of students who are poor readers and who struggle with overall fluency and comprehension. The researcher believes that additional research should be conducted to determine the effects of intervention programs on the achievement of below grade level students in the upper elementary grades.

In designing future studies, the first factor to consider would be the overall sample size. A larger and more representative sample size would have allowed the study to have more statistical power and would have made the results generalizable to a larger population.

Instructional group sizes are a variable that could be manipulated. The *SOAR* program suggests groups of three to seven students. The researcher conducted the study with one group of eight students in the *SOAR* program. It would be helpful to examine the impact of group size. If the intervention can be effective with relatively larger groups (e.g., eight students) when otherwise implemented according to recommendations that would be helpful information for educators because more students could be helped. However, if research shows that the intervention is significantly more effective with smaller groups; that would also be helpful information for educators, particularly when selecting interventions for children with very high needs.

Future researchers should also consider the length of time of the study. The current study was completed in six weeks and after the completion of five books. In order to assess the effectiveness of the *SOAR* program, student performances should be compared at the end of the

recommended 20 weeks/18 lessons. Although six weeks appears to be too brief a timeframe for the intervention to be effective, future research could examine if the intervention could be effective in less than 20 weeks since it may be logistically difficult for educators to commit to 20 weeks of the small group intervention

Conducting a pretest along with a posttest would also be a suggestion for future research. Having data to compare would be beneficial to demonstrate growth factors among the participants. It would also allow for an assessment of whether the groups differed in reading comprehension and fluency skills prior to the intervention. Due to time restraints and the loss of instruction needed to conduct individual pretests, the researcher used only post-intervention data. In addition, more components of the *QRI-5* could be used for instrumentation including word lists, background knowledge, and retelling, along with the words per minute and comprehension questions. Again, due to time constraints, the researcher gathered data on words per minute and comprehension questions from the participants.

Additional research could be generated by including data on the generalization of skills across the curriculum. Students do not use reading strategies in language arts alone, but in all subject throughout the day. Text is read in science, social studies, writing, and mathematics. Comprehension and fluency is needed in all areas of a child's education. Research could be included that determines the benefits of reading intervention programs as it relates to student achievement in other subject areas.

A final suggestion would be to assess any behavioral changes in students participating in the intervention. Researchers could implement a self-motivation survey prior to the study and then again once the study is complete. This would provide data on other beneficial aspects of the intervention in addition to academic achievement.

## Conclusion

This study used an experimental, posttest control-group only design to determine the effect of the *SOAR* reading intervention program on below level fifth-grade students. Although students were motivated and engaged in the program, the results showed that no significant difference existed between the students who had participated in the reading intervention program with traditional reading instruction and those students who only received traditional reading instruction in the classroom on *QRI-5* reading fluency and reading comprehension variables. Even though the data failed to reject the null hypothesis, the researcher believes the *SOAR* program was beneficial to those students who participated. Further research is suggested as there were several limitations to the study. Most importantly, due to logistical reasons, the intervention as implemented did not match the recommended procedures for duration and instructional group sizes.

Being able to read and understand what you read is one of the most important skills a student can have in the classroom. In addition, reading is a skill that is only useful not only in the classroom; it is of utmost importance in the young adult years and beyond when a student is striving to be successful. Despite this, there are thousands of young children who struggle with reading on a daily basis. The majority of these students have the ability to succeed. They just need to be given the tools. Reading intervention programs are tools that can be used to help lessen the gap between strong readers and struggling readers.

## References

- Chall, J. S., & Jacobs, V. A. (1983). Writing and reading in the elementary grades: Developmental trends among low SES children. *Language Arts, 60*(5), 617-626. Retrieved December 4, 2016.
- Cooper J. D., Boschken I., McWilliams J., Pistochni L. (2006). *Soar to success*. Boston, MA: Houghton Mifflin Harcourt.
- Flynn, L. J., Zheng, X., & Swanson, H. L. (2012). Instructing struggling older readers: A selective meta-analysis of intervention research. *Learning Disabilities Research & Practice (Wiley-Blackwell), 27*(1), 21-32. doi:10.1111/j.1540-5826.2011.00347.x
- GraphPad. (n.d.). Retrieved January 27, 2017, from <http://www.graphpad.com/quickcalcs/>
- Hasbrouck, J., & Tindal, G. (2006). Fluency Norms Chart. Retrieved April 3, 2017, from <http://www.readingrockets.org/article/fluency-norms-chart>  
Adapted from <http://www.readnaturally.com/pdf/oralreadingfluency.pdf>.
- Hausheer, R., Hansen, A., & Dumas, D. M. (2011). Improving reading fluency and comprehension among elementary students: Evaluation of a school remedial reading program. *Journal of School Counseling, 9*(9) 1-20.
- Leslie, L., & Caldwell, J.A. (2011). *Qualitative reading inventory: 5*. Boston, MA: Pearson/Allyn & Bacon.
- Lipson, M.Y., & Wixson, K. K. (2012). To what interventions are students responding? *Reading Teacher, 66*(2), 111-115. doi:10.1002/TRTR.01110
- Maryland Report Card. (n.d.). Retrieved March 5, 2017, from <http://reportcard.msde.maryland.gov/Entity.aspx?k=120120>

- Melby-Lervg, M., & Lervg, A. (2014). Effects of educational interventions targeting reading comprehension and underlying components. *Child Development Perspectives, 8*(2), 96-100. doi:10.1111/cdep.12068
- Mong, K. W., Mong, M. D., Henington, C., & Doggett, R. A. (2012). A comparison of four reading interventions from struggling elementary students using brief experimental analysis and extended intervention analysis. *Journal of Direct Instruction, 12*, 13-24.
- NAEP Nations Report Card. (n.d.). Retrieved November 19, 2016, from [http://www.nationsreportcard.gov/reading\\_math\\_2015/#reading/acl?grade=4](http://www.nationsreportcard.gov/reading_math_2015/#reading/acl?grade=4)
- National Institute for Child Health and Human Development. (n.d.). Retrieved April 3, 2017, from <https://www.nichd.nih.gov/research/supported/Pages/nrp.aspx>
- Reed, J. M., Marchand-Martella, N., Martella, R. C., & Kolts, R. L. (2007). Assessing the effects of the reading success level A program with fourth-grade students at a title I elementary school. *Education & Treatment of Children, 30*(1), 45-68.
- Ritchey, K.D., Silverman, R.D., Montanaro, E.A., Speece, D.L., & Schatschneider R,C. 2012). Effects of a tier 2 supplemental reading intervention for at-risk fourth-grade students. *Exceptional Children, 78*(3), 318-334.
- Scholastic Inc. (2006a). *Scholastic Reading Inventory: Educators Guide*. New York: Editor.
- Therrien, W. J. (2004). Fluency and comprehension gains as a result of repeated reading. *Remedial & Special Education, 25*(4), 252-261.
- Vernon-Feagans, L., Kainz, K., Amendum, S., Ginsberg, M., Wood, T., & Bock, A. (2012). Targeted reading intervention: A coaching model to help classroom teachers with struggling readers. *Learning Disability Quarterly, 35*(2), 102-114. doi:10.1177/0731948711434048

Wanzek, J. (2010). Reading interventions for struggling readers in the upper elementary grades:

A synthesis of 20 years of research. *Reading and Writing*, 23(8), 889-912.

Wanzek, J., & Roberts, G. (2012). Reading interventions with varying instructional emphases for

fourth graders with reading difficulties. *Learning Disability Quarterly*, 35(2), 90-101.

doi:10.1177/0731948711434047

Wanzek, J., Vaughn, S., Scammacca, N.K., Metz, K., Murray, C.S., Roberts, G., & Danielson, L.

(2013). Extensive reading interventions for students with reading difficulties after grade 3.

*Review of Educational Research*, 83(2), 163-195.

Woodward, M.M., & Talbert-Johnson, C. (2009). Reading Intervention Models: Challenges of

Classroom Support and Separated Instruction. *The Reading Teacher*, 63(3), 190-200.

doi:10.1598/RT.63.3.2