

Effects of the Retelling to Synthesize Strategy when used to Increase the Reading
Comprehension Scores of Low Performing Third Grade Students in an Inclusion Classroom

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Abstract

The purpose of this study was to determine whether ‘Retelling to Synthesize,’ is a more effective instructional strategy than less structured classroom instruction in developing reading comprehension skills among low performing third grade students. The study consisted of a pre-experimental, static-group comparison with groups (N = 5) matched based on reading ability from a convenience sample of students. Both groups participated in small group instruction but the control group was not instructed in a specific reading strategy. There was no significant difference between the treatment group (Mean = 38.20, SD = 6.72) and control group (Mean = 33.40, SD = 6.84) on reading comprehension scores derived from short-cycle and benchmark assessment scores after six weeks of intervention with a t-score of $[t(4) = 1.50, p > .05]$. However, the study had multiple limitations, including low statistical power, which likely impacted results. Although there were no significant findings, the trend of the results, as well as observations, suggest that the strategy may improve reading comprehension and is worth future study. Educational implications and suggestions for future research are discussed.

CHAPTER I

INTRODUCTION

Overview

Schools must ensure that all students, regardless of their disabilities, are receiving a quality educational program that meets their individual needs as learners. Schools are increasingly using the inclusion model where students with disabilities are included in the general education classroom with their non-disabled peers. Within the general education setting, general education teachers are working alongside special education teachers to ensure the success of low performing students within the classroom. The following action research works to find if small group intensive intervention will assist low performing students maintain or increase their ability to complete on grade level material within an inclusion setting.

Statement of Problem

The purpose of this study was to determine whether ‘Retelling to Synthesize,’ increases overall reading comprehension performance among low performing third grade students.

Hypothesis

The null hypothesis is that there will be no significant difference in the reading comprehension scores of low performing third grade students in an inclusion classroom who are instructed in the Retelling to Synthesize (Key Word Strategy) and the reading comprehension scores of ability-matched controls who are not instructed in the strategy.

Operational Definitions

The dependent variable is the reading comprehension score. The reading comprehension score is a combination of points earned on reading short-cycle assessments and reading benchmark assessments. Items indirectly related to reading comprehension (e.g., vocabulary)

were not included in the scores. Students complete short-cycle assessments after each reading selection and a benchmark assessment at set points during the school year. The score was based off the results of two short-cycle assessments and one benchmark assessment. The score was based on the total number of points earned out of a possible 52 points.

The independent variable is the Retelling to Synthesize strategy, a program that teaches students to utilize key words to summarize what they have read in small group instruction.

CHAPTER II

REVIEW OF THE LITERATURE

This literature review will discuss the skills which are necessary for students to develop into effective readers and those reading skills that will enable students to become successful in their academic careers. Section one explores the stages of development in reading acquisition and its implications for students with learning disabilities. Section two focuses on reading comprehension instruction. Section three explores elements of effective reading intervention models and discusses various reading comprehension intervention models. The final section reviews how to determine a student's response to intervention.

Learning to Read

The ability to read and understand what is read is a key component of academic success for students as they progress through their education. Unfortunately, studies show that students across the country are having difficulty developing into successful readers. According to the Center for the Improvement of Early Reading Achievement (2001), "Reading failure has exacted a tremendous long-term consequence for children's developing self-confidence and motivation to learn, as well as for their later school performance" (p. ii). As students progress through the elementary grades, it is vital that each component of reading is developed and mastered so that students can continue to progress through the stages of reading acquisition and become successful readers. In response to the federally mandated No Child Left Behind legislation, which specifies that all students will be reading on grade level by 2010, the Put Reading First initiative was developed to educate parents, teachers, and the nation about key elements of successful reading programs. Based on the information presented within the initiative and

research studies, five areas of reading instruction emerged as vital to successful reading acquisition: phonemic awareness, phonics, fluency, vocabulary, and text comprehension (Ibid).

Before further discussion of how students develop the ability to read, it is important to define what is meant by reading in this review. Reading is the process that a reader proceeds through to find meaning in what is written in order to construct meaning (Bennett, 1998; Jenkins & O'Connor, 2001). Reading instruction begins at the most basic level, which is the development of phonemic awareness, and ends with the critical stage of text comprehension. The following stages of reading development are followed by a brief description of their meaning as they are defined by the Center for the Improvement of Early Reading Achievement (2001):

Phonemic awareness – hearing, identifying, and manipulating sounds within words

Phonics – recognizing relationships between letters and sounds

Fluency – reading text in an accurate and quick manner

Vocabulary – knowing the meaning of words to communicate effectively

Comprehension – understanding what was read

These building blocks of successful reading begin at an early age and continue to develop throughout the school years. Developing readers move at different rates through the stages of reading acquisition and require different levels of support and instruction; however, it is becoming more apparent that students in the upper grades are struggling with the ultimate goal of reading, which is to understand what has been read (Nation & Angell, 2006). This is especially true of students identified with learning disabilities. It is important to understand that the stages of reading have no definite beginning and ending, but as students work in all areas simultaneously they are developing their reading skills, with each stage becoming more complex

as the students acquire more knowledge (Kendeou, Lynch, van den Broek, Espin, White, & Kremer, 2005). An increasing concern of schools is the students who are emerging as poor readers despite receiving strong instructional programs that follow the stages of reading development.

Research conducted by Schmidt, Rozendal, and Greenman (2002), shows that of the 2.5 million students with disabilities, 51% of those students receiving special education services are considered learning disabled. In 2006, of the students identified as learning disabled and receiving special education services, 80% were considered reading disabled (Fuchs & Fuchs, 2006; Schmidt et al.). Since reading comprehension requires students to read words, comprehend language, and utilize background knowledge to make connections to the text, students with cognitive difficulties suffer greatly when trying to comprehend due to the amount of processes that need to occur simultaneously (Jenkins et al., 2001). Students with learning disabilities have an increased disadvantage for developing reading and comprehension skills over their classmates without cognitive difficulties. In order to understand why these reading difficulties develop, it is vital to know what differences exist between effective and ineffective readers.

Effective readers continually progress through the stages of reading acquisition throughout early elementary years. These readers are able to successfully develop an awareness of print, the ability to recognize shapes of letters, a knowledge of the sounds of letters, the association of letters with words, decoding and word recognition skills, the ability to identify words in print accurately and easily, a knowledge of spelling patterns, and the ability to comprehend language (Bennett, 1998, p. 14).

In contrast, ineffective readers do not develop the previous skills in a timely or accurate manner, which then leads to reading and comprehension difficulties as they progress through school. There are numerous reasons why students may not move successfully through the stages of reading development. For one, struggling readers may have cognitive delays that do not allow for their brains to process information adequately to understand and acquire the skills necessary for the reading process such as orthographic and phonological awareness, phonological processing, and fluent and accurate word recognition (Bennett, 1998; Moats, 2001; Schmidt et al., 2002).

Readers who develop difficulties reading fluently due to phonological deficiencies, vocabulary delays, and inaccurate word recognition then encounter decreased text comprehension. Currently, there are numerous reading interventions aimed at early elementary grades that address phonics, vocabulary, and fluency concerns among students. Assessments are available for early identification of students who may develop reading difficulties; however, these assessments have not provided consistently accurate results about which students will develop reading problems throughout their schooling (Jenkins et al., 2001). Those students who are not correctly identified or do not respond to intervention in the early elementary grades will be at increased risk for comprehension concerns in the intermediate elementary grades and will most likely need “more specialized instruction” (Wanzek & Vaughn, 2008, p.3).

Teaching Reading Comprehension

“Text comprehension is the reason for reading,” (p. 3) according to the Center for the Improvement of Early Reading Achievement (2001) and if students read words without understanding what the words mean in context, real reading is not occurring. Text comprehension means a student understands what is read, knows when he/she does not

understand, and then can utilize comprehension strategies to aid in his/her comprehension. If a student is unable to read words, comprehend language, and access necessary background knowledge, the student will struggle with developing necessary reading comprehension (Jenkins et al., 2001; Kendeou, et al., 2005).

Nation and Angell (2006) consider the premise that there is a strong connection between listening comprehension, text comprehension, and language acquisition. Students who struggle with listening and text comprehension are most likely having language difficulties which do not allow them to make connections to the text that would enable them to gain an increased level of text comprehension (Kendeou et al., 2005; Nation & Angel,). Good reading comprehension instruction will include various elements of instruction that will aid students in developing listening, reading, and language comprehension skills.

Reading comprehension is a complicated and complex process that requires numerous prerequisite skills to be successfully accomplished and can fail for numerous reasons (Kendeou et al., 2005; Nation & Angell, 2006). Therefore, teachers need to begin developing reading comprehension early on rather than waiting for students to acquire the basic skills of reading before beginning comprehension instruction (Center for the Improvement of Early Reading Achievement, 2001; Kendeou et al.). Reading comprehension instruction should encompass teaching students that reading is being able to make sense out of text, construct meaning, understanding and making connections between the facts and previous experiences, and understand how basic grammar and sentence structure influences meaning (Center for the Improvement of Early Reading Achievement; Council for Educational Development and Research, 1997; Moats, 2001; Spiegel, Vickers, & Viviano, 1999).

In order for effective comprehension to develop, students need to have multiple interactions with the same text throughout multiple instructional days. Research shows that successful reading comprehension integration occurs through explicit instruction. The four-step model that emerges throughout the research, while given slightly different terms, is relatively the same. Reading instruction should begin by the teacher setting a purpose for reading, should be followed by teacher modeling and guided practice, and should then conclude with independent practice (Center for the Improvement of Early Reading Achievement, 2001; Flood, 2003). The teacher should begin comprehension instruction by activating and developing necessary background knowledge and vocabulary development (Kendeou et al., 2005; Nation & Angell, 2006). Explicit instruction in different comprehension skills such as questioning, story structure, summarizing, clarifying by answering and generating questions, and predicting should be modeled and practiced in order to aid students in their comprehension (Center for the Improvement of Early Reading Achievement; Flood).

Comprehension instruction is complex and requires direct explicit instruction; nonetheless, students with learning disabilities require this same type of instruction to successfully develop reading comprehension. As discussed earlier, the cognitive difficulties that learning disabled students encounter make reading comprehension acquisition even more difficult. The next question that needs discussion is whether students with learning disabilities will meet academic outcomes more successfully in an inclusive or self-contained (pullout) setting.

Since the Americans with Disabilities Act, the inclusion model of instruction has been widely implemented in schools, and self-contained settings are reserved for severely learning-disabled students. Students with disabilities are to be provided with equal access to the

instruction of their non-disabled peers in an inclusive classroom setting whenever possible. Research indicates that students with learning disabilities, whether receiving instruction in an inclusive setting or pullout setting, do not necessarily perform better in a pullout program (Schmidt et al., 2002; Willrodt & Claybrook, 1995). Students with learning disabilities that affect their reading and comprehension abilities benefit from the same strategies used with general education students who are at risk for reading failure such as repeated instruction, more time with text, cognitive instruction, and specialized intervention that is directed at word recognition, fluency, and comprehension skills (Schmidt et al.; Spiegel et al., 1999; Willrodt & Claybrook).

Reading Intervention

Students at risk for reading failure, such as those who are diagnosed as learning disabled or those not meeting grade-level expectations are candidates for receiving reading intervention. Students who have been provided with effective classroom instruction by skilled professionals in the regular education setting and are not retaining necessary reading skills are most in need of these interventions. Reading intervention programs are not designed to take the place of good instruction but instead are to be used in addition to the regular reading program. While students already diagnosed with reading disabilities may benefit from intervention, not all are in need of intervention in addition to their regular reading time. According to Fuchs & Fuchs (2006), intervention groups should be formed based on previous year's high-stakes assessments and performance on benchmark assessments, which predict upcoming high-stakes assessment performance.

There are numerous reading interventions being used in school systems, though not all are equally effective. Effective intervention programs should include explicit instruction, a small

group setting (five or fewer students per group), repeated reading of text, reading for meaning, and additional time in intervention (Bennett, 1998; Calhoon, 2005; Wanzek et al., 2008). While the most effective intervention programs are targeted at younger students to develop phonics, phonemic awareness, and fluency concerns, more research is emerging on intervention programs for intermediate students to assist with comprehension instruction. Reading comprehension is of the utmost concern for students in the intermediate elementary, middle, and high school levels.

One type of reading comprehension instruction is reciprocal teaching which teaches students “cognitive strategies that will help them to improve their reading comprehension skills” (Takala, 2006, p. 560). This intervention model is targeted at upper elementary and middle school students and focuses on comprehension-fostering and comprehension-monitoring skills that will help a student monitor his/her own comprehension while he or she is being taught comprehension-building strategies. Predicting, clarifying, questioning, and summarizing are the four strategies that are taught in reciprocal teaching through the use of student and teacher dialogue. As each strategy is discussed and modeled with the text, students are working on understanding the strategies and applying them to a specific text for practice. Students with behavioral and learning disabilities who are able to decode text but not comprehend successfully have shown positive results with this intervention.

While comprehension instruction can be taught explicitly in small groups with models such as reciprocal teaching, peer instruction in a larger group setting is another method of comprehension intervention that is used with struggling students. Peer-Assisted Learning Strategies (PALS), which is a way to differentiate instruction and provide intervention with large groups of students struggling with comprehension, has shown to improve reading comprehension and fluency by placing students in pairs to enhance reading comprehension (Calhoon, 2005;

Fuchs & Fuchs, 2005). PALS is designed for students to work in pairs to complete three explicit reading activities. “During PALS, students participate in three essential reading comprehension activities while reading aloud from narrative text: Partner Reading, Paragraph Shrinking, and Prediction Relay” (Calhoon, p. 425). These three activities utilize explicit, systematic practice of comprehension strategies to increase student performance. Current research indicates that students who participate in PALS display an increase in reading fluency and comprehension when receiving the program two to three times per week. More importantly, data from the PALS intervention model shows that all students who participate in the program (regular education and inclusive education students) improve their reading performance when participating (Calhoon; Fuchs & Fuchs).

Total class peer tutoring or classwide peer tutoring (CWPT) is a form of peer-mediated intervention which provides students with additional time working on skills in pairs or in small groups rather than independently (Calhoon, 2005; Kourea, Cartledge, & Musti-Rao, 2007). Students are provided with additional time to practice and model taught skills with peers where they are able to receive additional feedback. This CWPT enables students to have additional time with text, receive more time actively engaged with text, receive feedback from peers, and engage in meaningful discussion about text (Calhoon; Kourea et al.). Again, this method of large group intervention has shown positive benefits for students with disabilities in an inclusive setting. While this intervention was originally designed to foster sight-word recognition and practice, benefits in reading fluency and comprehension are observable due to the additional time students spend reading aloud to peers and encountering repeated reading of the same text.

While two of the previously discussed intervention models are not considered pullout programs, programs involving a teacher working with a small group of students, they do

encompass many elements of effective intervention models. The PALS and CWPT interventions provide large numbers of students with access to the features of a small group intervention to increase comprehension skills. These interventions also allow for an important element of effective comprehension intervention that includes allowing time for students to read aloud as well as silently to develop comprehension (Hale, Skinner, Williams, Hawkins, Neddenriep, & Dizer, 2007).

Small group instruction models allow teachers to work specifically with 4-5 students who demonstrate difficulty attaining taught skills. One method used to increase reading comprehension of low performing students is by teaching students how to synthesize information. When you synthesize information you are using prior knowledge to understand and make sense of small amounts of new information that has been presented (Harvey & Goudvis, 2000). As students receive new information, it is important to connect the new information to existing information in small pieces so that it is easy to retrieve from memory. While synthesizing information is one of the most difficult of comprehension strategies to teach, it is extremely beneficial in aiding students overall text comprehension. By teaching synthesizing of information, students are taught how to think as they read which aids in remembering what was read. The “Retelling to Synthesize” strategy teaches students to remember keywords as they read to aid in their overall reading comprehension. Students who receive small group instruction in Retelling to Synthesize are provided with necessary skills to help decide what is important in the text they are reading which aids in their overall comprehension of the selection (Harvey & Goudvis, 2000).

Response to Intervention

Across the country, students have been identified as having reading difficulties and placed in various reading intervention programs. The obvious question that parents, teachers, and administrators have next is whether the interventions are working. Students placed in reading intervention programs are monitored on their 'Response to Intervention' (RTI). RTI is based on whether a student is making progress and benefiting from the intervention he/she is receiving. Most mainstream intervention programs have their own pre, post, and progress monitoring assessments and indicators so that student progress can be evaluated. If an intervention does not have an assessment means already in place, students can be given a measure prior to intervention and again after intervention that can be used to determine his/her level of progress (Fuchs & Fuchs, 2006). Measurement tools can be informal assessments completed by the classroom teacher (such as formative assessments), curriculum-based assessments, and informal reading inventories. More valid measures to determine achievement can also be used, such as the Woodcock Johnson Achievement Test, the Brigance Assessment, and various other specialized assessment tools.

Determining a student's response to intervention is even more important since the Individuals with Disabilities Education Act (IDEA) of 2004 was signed by President Bush. Previously, for a student to receive a diagnosis of a learning disability, he/she needed to be diagnosed by administering an IQ-achievement test. Now, the history of a student's lack of response to intervention can be a means of diagnosis (Fuchs & Fuchs, 2006). This makes tracking a student's progress even more important for educators. Students who continue to be considered low responders to intervention will most likely need "very intensive and ongoing intervention over time and their response to these interventions is likely to be slow" (Wanzek et al, 2008, p.10) based on what research shows about low responders.

Summary

It is important for students to develop into successful readers who are able to understand what they are reading while in elementary school in order to be successful throughout their educational careers. Students who are already at risk for reading failure, especially those who display comprehension problems, are in greater need of interventions that will assist them in overcoming their reading difficulties. It is vital that appropriate intervention models are applied to the educational program and that the effectiveness of each model is tracked so that students who exhibit a low response to intervention can receive additional support to acquire solid reading skills, especially in the area of reading comprehension. Unfortunately, if a student is unable to comprehend what was read, reading did not effectively occur.

CHAPTER III

METHODS

The purpose of this study was to determine whether ‘Retelling to Synthesize,’ a program that teaches students to utilize key words to summarize what they have read, would increase their overall reading comprehension performance.

Design

This study was a pre-experimental, static-group comparison with groups matched based on reading ability from a convenience sample of students. The independent variable was students’ participation or non-participation in the Key Word strategies intervention that teaches students to summarize a selection with only a few key words that remind them of the events that occurred in the selection. The dependent variable was a reading comprehension score generated from three short-cycle assessments administered during the treatment and one benchmark assessment administered during the treatment.

Participants

The participants in the study consisted of 10 students from a third grade inclusion classroom at a Title I public elementary school in a suburb of a mid-sized city in the mid-Atlantic region. The school is mostly comprised of African Americans (91.9%), with 13.3% of students receiving free/reduced price meals. The total number of participants in the treatment and control groups was ten: five females and five males, all of whom were African American. There were 3 females and 2 males in the treatment group and 3 females and 2 males in the control group. Within the control group, one student received services through a 504 Plan and one student had an IEP, and three were low performing general education students. The treatment

group contained one student with a 504 Plan, one student with an IEP, and three low performing general education students.

These groups were formed by determining each student's combined comprehension score of two short-cycle assessments and one benchmark assessment while taking into account which type of formalized education plans he/she possesses. The short-cycle and benchmark assessments were administered in a group testing format by the classroom teachers. The ones used for pairing purposes were administered on October 13, 2008; November 5, 2008; and December 1, 2008. The maximum amount of points that could be earned on the comprehension portion of the assessments was 52. Students in both groups received less than 50% accuracy on comprehension questions, with scores ranging from 15 to 25 points. Students were matched based on having identical comprehension scores and on receiving the same accommodations/modifications, either through an IEP or 504 Plan.

The researcher chose a third grade classroom for this study due to the large class size of 27 students, and high number of students in need of small group instruction. This particular classroom also has displayed difficulty earning passing scores on county short cycle and benchmark reading assessments. Students in the grade are grouped homogenously based on reading ability as determined by the previous year's DIBELS (Dynamic Indicators of Basic Early Literacy Skills) scores (University of Oregon, Center for Teaching and Learning). The DIBELS assessment is completed at all Reading First schools and is administered by a trained teacher. The size of the control and experimental groups were selectively small due to the research that indicates that reading interventions performed in groups of 5 or less are statistically more effective than interventions which contain more students.

Instrument

In addition to helping form matched groups, short-cycle and benchmark assessment scores were used as the instruments for determining if the students in the two groups, initially matched for reading comprehension skills, differed in reading comprehension skills after the intervention. Short-cycle assessments are administered to students at the end of each reading selection, and the assessment contains questions that are directly related to the selection. These assessments contain 3-4 vocabulary questions, 4-5 phonics and grammar questions, and finally 10-12 comprehension questions. The comprehension questions are comprised of selected response questions where the student chooses the correct answer from a possible four choices and fills in the circle for his/her choice and constructed response questions where the student must write 2-4 sentences stating his/her answers along with support for that answer.

Benchmark assessments are longer, and comprehension questions are based on selections that students read at the time of the assessment (cold read). Benchmark assessments also contain selected response questions and constructed response questions. For the purposes of this study, all data was obtained by examining only those comprehension questions on the short cycle and benchmark assessments. Questions that assessed vocabulary, phonics, or grammar were not included in the reading comprehension scores score.

Short Cycle assessments are created by the county Office of Language Arts to ensure that all students are being tested on identical information throughout the county. These short cycle assessments are also aligned with questions that mirror the skills that will be assessed on the benchmark assessments twice per year. The benchmark assessments are currently administered so that the county can begin collecting data to determine if the scores students earn on benchmark assessments are predictors of students' scores on the Maryland State Assessment (MSA).

The short cycle assessment and benchmark assessment data that this researcher analyzed was scored by two means. Currently, selected response questions are scored automatically by scantron and uploaded into the county's AssessTrax System for data analysis. Constructed response questions are scored by the classroom teacher on a three point scale, inputted into the AssessTrax System, and totaled, providing the teacher with a student's total score. Scoring rubrics for constructed response questions are provided for both short cycle assessments and benchmark assessments from the county's Office of Language Arts.

Procedure

Groups were formed so that 5 students would receive the Keyword Strategy Instruction and 5 students would receive regular classroom instruction. The treatment group worked with this researcher for 30 minutes four days per week learning how to summarize with the Keyword Strategy. The remainder of the class worked as they have all year, receiving direct instruction from the classroom teacher, independent work time, center time, and silent reading time. The treatment group alternated between missing center time and silent reading time. Students in the treatment groups always received the same amount of direct instruction from their classroom teacher and independent work time to complete assigned work as the students in the control group did.

During the time that this researcher was engaged in Keyword Strategy Instruction with the treatment group, the remainder of the class was either 1) in a flexible small group lead by the regular classroom teacher who retaught skills based on need; 2) in a small group led by a special education inclusion teacher who gave fluency instruction; or 3) completing independent work, centers, or silent reading. The treatment group was the only group to remain the same daily since the researcher was providing a consistent intervention. The students in the control group

were treated the same as the children not involved in the study, receiving small reteach group instruction for individual skills as needed, participating in fluency instruction, or completing independent work, centers, or silent reading.

Students receiving the Keyword Strategy Intervention received 30 minutes of small group instructions that began by focusing attention on the task by reading the daily objective, which was the same each day: “Today we will summarize our story a page at a time so that we will understand what we are reading.” The following procedures were then followed each day:

1. Researcher explanation which discussed the need for understanding what is read. Students are told that we will read each page looking for a keyword or important word in each paragraph on the page. After we have a word from each paragraph, we will use those words to form a sentence about what happened on that page before reading the next page.
2. Researcher modeling during which the researcher reads an entire page of text. Then, the researcher rereads each paragraph, recording an important or keyword from each paragraph. Finally, the researcher will use all words to write a sentence summarizing the information from that page.
3. Researcher models and discusses each step that is occurring with the group. Researcher says, “I will read this page. As I read the first paragraph, --- is the keyword. I will write it down. In the next paragraph, --- is the most important word. I will write it down. This continues until all paragraphs are complete. I will read all of my keywords and form a summary sentence using these words. My summary sentence is ----. Notice how it includes all the key words and reminds me what I just read.”

4. Researcher encourages talk between the group and individuals. The researcher will read the next page, allowing each student to write the keyword that comes to his/her mind after each paragraph. Students then write their own summary sentence and shared with the group. Responses are discussed showing how they could be different as long as each person understands what was read.
5. Researcher then restates the steps that each student must take to implement the keyword strategy on his/her own. Read each page. Reread and write the key word from each paragraph. Write a summary sentence to summarize the page.
6. Students will work on their own to implement the strategy on their own.

This procedure was followed each day the same way with the only change being a different text. Students began working with below level readers (one year below actual reading level) and gradually moved to more challenging readers with additional words and paragraphs per page.

The Key Word strategy intervention was implemented from April through June of the 2008-2009 school years. The short-cycle and benchmark assessments used to derive the reading comprehension score for the outcome variable of this study were administered throughout various times during the intervention period with one administered at the completion of the intervention period. Assessments were administered on May 5, 2009; May 18, 2009; May 29, 2009; and finally June 3, 2009. The study lasted a total of 6 weeks with students receiving 30 minutes of instruction four times per week during the length of the study.

The reading comprehension scores of the treatment and control groups were compared by non-independent sample t-tests.

CHAPTER IV

RESULTS

The purpose of this study was to determine, among low performing third grade students, whether students who learn the ‘Retelling to Synthesize,’ strategy have better reading comprehension performance than ability matched students that do not learn the strategy.

Students in the test group were ability matched with students in the control group to determine the effectiveness of the intervention. Since the groups were formed by matching students with identical reading comprehension scores, the groups had identical descriptive statistics on the initial reading comprehension score (Mean = 21.4, SD = 4.16). Based on scores generated during and after the intervention (on different tests than the tests used for matching), the intervention group (Mean = 38.32, SD = 6.72) continued to not differ significantly from the control group (Mean = 33.4, SD = 6.84) [$t(4) = 1.50, p > .05$]. See Table 1, Thus, the null hypothesis that there would be no significant difference in the reading comprehension scores of low performing third grade students in an inclusion classroom who were instructed in the Retelling to Synthesize (Key Word Strategy) and the reading comprehension scores of ability-matched controls who were not instructed in the strategy failed to be rejected.

Table 1

Reading Comprehension Scores of Students Receiving

Retelling to Synthesize Strategy and a Matched Control Group and t-test Results

Group	N	Mean	Standard Deviation	t-test
Intervention Group	5	38.20	6.72	1.50 (NS)*
Control Group	5	33.40	6.84	

t-Test was non-significant at $p < 0.05$

Although there were no statistically significant differences between the two small groups, it is noteworthy that the control group's mean reading comprehension score was 60% while the intervention group's mean reading comprehension score was 68%. Thus, while this study, of very limited statistical power, provides no statistical evidence of a difference between treatment and control groups, it provides preliminary data suggesting the possibility that there may be a benefit from the Retelling to Synthesize strategy.

CHAPTER V

DISCUSSION

The results of this study fail to reject the null hypothesis that there would be no significant difference in the reading comprehension scores of low performing third grade students in an inclusion classroom who were instructed in the Retelling to Synthesize (Key Word Strategy) and the reading comprehension scores of ability-matched controls who were not instructed in the strategy. Students who received the Retelling to Synthesize strategy intervention did not significantly differ in their performance on reading comprehension assessments as compared to ability matched students who did not receive the interventions.

Threats to Validity

There are numerous threats to the validity of this study. The largest threat was the very small sample sizes. With group sizes of 5 and 5, the study had extremely low statistical power. Thus, it was extremely unlikely to find statistically significant differences between groups. Even if statistical differences had been found, the results would have needed to have been interpreted very cautiously since, with small group sizes, outlier scores could have disproportionate effects. Consequently, the study needs to be considered exploratory in nature. Since the study was so limited in power, the failure to reject the null hypothesis should not be interpreted as meaning the intervention was ineffective.

Another threat to validity is that the researcher conducted this study in one school, in one grade level with only one classroom. Due to convenience, the researcher also chose to conduct this study at the school where she is employed. Administering this study across numerous classrooms with more diverse students would give more data to determine whether the Retelling to Synthesize strategy is an effective method to increase students reading comprehension scores.

Another threat to validity is the researcher was unable to control the instruction provided to the students within the classroom during the study. At the time the study began, the classroom teacher began instructing all students in small groups of 5 students daily. This practice may have had huge affects on the results of the study since research indicates that students receiving instruction in groups of five or less have a greater response to intervention. Effective intervention programs also include explicit instruction, repeated readings of text and additional time in a small group setting. While this was provided in the intervention, it was also provided to all students by the classroom teacher for the duration of the intervention. Thus, this study was not able to compare the value of small group instruction using the Retelling to Synthesize strategy as compared to typical large group instruction. However, on the positive side, the classroom teacher's decision to use small groups with the other students allowed the possibility of distinguishing the specific effectiveness of the Retelling to Synthesize strategy relative to other small group reading instruction strategies.

The method in which the data was collected could also pose a threat to the validity of the study as well. In order to have a dependent variable with enough data to allow variability, data was collected during and after the intervention period. Therefore, students had only received a few sessions of the intervention prior to part of the data collection. Ideally, the intervention would be in place for 2-3 weeks or 10-15 thirty minute sessions prior to data collection so that students would have had a longer time to benefit from the intervention. While the intervention itself does not have a set time frame for full implementation, its purpose is to provide students multiple exposures to reading and summarizing selections which will aid in their overall ability to summarize a story.

An additional threat to validity is that one student in the intervention group missed 50% of the intervention due to absences and tardiness. This student's scores were still kept part of the overall results due to the small group size. While this student was allowed to make up any missed work, participation in the explicit instruction time was missing due to the absences and tardiness. The raw scores of the absent student were lower than all other students in the test group.

Implications of Study

While the results of this study indicated no statistical differences between the intervention group and control group, observations and the fact that, the overall performance on assessments was higher, albeit not statistically, with the intervention group suggest that Retelling to Synthesize is a reasonable strategy to use in the classroom while more research on its effectiveness is conducted . While completing the intervention it was noticeable that students were beginning to carefully read each page and think about a key word that would describe the events of the page. Each week, the students showed more comfort when asked to retell the events of the story while only looking at the key words they provided as they read each page.

This researcher's observation of student behavior was that as the intervention period continued, students were confident in their ability to remember the overall theme of the selection and with some students more details began to emerge in their writing each week. When examining the raw data from short-cycle assessments, one participant earned a 93% on an assessment while her performance prior to the intervention showed a high score of 50%. The classroom teacher even commented on how well she was doing in class and on her assessments since working in the intervention group.

This researcher would consider this strategy an effective strategy to teach all students to remember what they are reading. As far as a formal intervention to increase reading comprehension, this researcher's opinion is that the Retelling to Synthesize strategy should also be paired with direct instruction on individual skills. However, this researcher believes that providing these low performing students with an opportunity to work in an additional small group 4 times per week with repeated exposure to new texts was highly effective based on individual students increased performance.

Comparison to Previous Research

Although this study did not provide statistical evidence that the strategy is effective, the observations and the trend of the student data suggest that it is a useful strategy. Thus, it is not inconsistent with previous research that has found that students who receive small group explicit instructional and additional practice on reading comprehension strategies for at least 3-4 times weekly show an increase in reading comprehension and fluency (Calhoon; Fuchs & Fuchs). The preliminary evidence from this study is also not inconsistent with research that indicates that when students are able to talk with each other about their reading and check comprehension in large group settings they show increased reading comprehension (Calhoon; Kourea, Cartledge, & Musti-Rao). Overall, the trend of the findings are not inconsistent with previous research that shows that the more time low performing students can spend in small groups multiple times a week receiving additional practice and guidance with a teacher the more effective the intervention is on performance. (Schmidt et al.; Spiegel et al.; Willrodt & Claybrook).

Recommendations for Future Research

Although this study provides no statistical evidence of the effectiveness of the Retelling to Synthesize strategy, it provides preliminary data suggesting that it may be effective.

However, additional research is necessary to examine its effectiveness.

Future research should be conducted including students from various socioeconomic groups. When conducting this research, the sample size should increase to provide additional data and include students across various intermediate grade levels. While reading comprehension begins to develop in kindergarten, it becomes the basis of reading instruction beginning in third grade.

While students receive the intervention, they should not participate in any other small group instruction within the same subject area. All other reading instruction should be in a large group setting to ensure that additional time in small group instruction does not interfere with the validity of the intervention unless the focus of the other research is comparison of different small group strategies. Regardless, in future research the alternative instruction should be more standardized, particularly if there are multiple groups in different classrooms.

In order to ensure that enough data can be collected and all data comes from after the intervention period is complete; the intervention should take place earlier in the school year so that the data can be collected after the students have had longer exposure to the intervention. Alternatively, one benchmark assessment could be completed at the completion of the intervention period but it would need more comprehension items than the typical benchmark assessment so that the dependent variable would have enough variability

One possible study could have students identified early in the academic year, participate in the intervention for six to ten weeks and then complete the winter reading benchmark. They would then return to standard classroom instruction. Then at the end of the school year they

could complete the spring benchmark to determine if the intervention has long term effectiveness once it is no longer an active part of instruction.

While no statistically significant results were obtained from this study it provided preliminary evidence that students who regularly participate in Retelling to Synthesize small group instruction improve comprehension skills. Schools should continue to monitor the use of interventions that address reading comprehension. It is vital that students receive any additional instruction they need to make adequate progress towards grade level standards.

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