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Teaching Kindergarten Reading Comprehension Using Transactional Strategy Instruction

Heather Schultz

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Abstract

This action research study investigated the improvement of reading comprehension by implementing two strategies: question generation and think aloud in the context of transactional instruction. A kindergarten class of 28 students at a charter school in east Michigan was used as an experimental group. The control group was made up of 27 kindergarteners from another class. All students, both in the experimental and control groups, were given a pre-test to track the application of all strategies before teaching began. The experimental group was taught two strategies: how to generate questions and how to observe and think aloud about what they were reading in a collaborative setting. These two strategies were supported by the scaffolding technique of transactional instruction. Students in the control group were taught using a standardized curriculum. A post-test was given at the end of the designated time and results were calculated. Data showed that although comprehension was comparable for both the control group and experimental group during the pre-test, there was an increase in overall understanding for the advanced students in the experimental group after the treatment.

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by

Heather Schultz

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Teaching Kindergarten Reading Comprehension Using Transactional Strategy Instruction

by

Heather Schultz

Approved:

Dr. Pat Kornelis
Faculty Advisor

04/19/2017
Date

Approved:

Dr. Steve Holtrop
Director of Graduate Education

04/19/2017
Date

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Table of Contents

List of Figures

List of Tables

Table   Page

Abstract

This action research study investigated the improvement of reading comprehension by implementing two strategies: question generation and think aloud in the context of transactional instruction. A kindergarten class of 28 students at a charter school in east Michigan was used as an experimental group. The control group was made up of 27 kindergarteners from another class. All students, both in the experimental and control groups, were given a pre-test to track the application of all strategies before teaching began. The experimental group was taught two strategies: how to generate questions and how to observe and think aloud about what they were reading in a collaborative setting. These two strategies were supported by the scaffolding technique of transactional instruction. Students in the control group were taught using a standardized curriculum. A post-test was given at the end of the designated time and results were calculated. Data showed that although comprehension was comparable for both the control group and experimental group during the pre-test, there was an increase in overall understanding for the advanced students in the experimental group after the treatment.

Introduction

There is cause for concern for today's students as their reading levels and reading proficiency plummet. According to the National Assessment of Educational Progress (NAEP), 80% of low-income 4th graders and 66 % of all 4th graders are not proficient in reading (The Annie E Casey Foundation, 2017, p. 1). Because of this decline, "only one-third of all students entering high school are proficient in reading -- only about 15 percent of African American students, and 17 percent of Hispanic students" ("Facts About", 2013, p. 1). These statistics correlate with a decline in the future success of our children. Having more than half of the students never reach a proficient reading level is a major concern for our society. By 2020, the United States is expected to have a shortage of workers with college degrees and a surplus of unemployed individuals who have obtained a high school diploma but lack the educational credentials to enter the workforce (The Annie E. Casey Foundation, 2017).

This lack of proficiency in reading has both economic and social consequences. The job market today has a higher demand for students with strong literacy skills. With the increase in demand for higher reading levels, and the decrease in reading comprehension, the gap that is being created is becoming more significant. Illiteracy has become such a serious problem in our country that 44 million adults are now unable to read a simple story to their children. Three out of four people on welfare cannot read and 50% of the unemployed between the ages of 16 and 21 cannot read well enough to be considered functionally literate (Literacy Project Foundation, 2008-2017). These statistics show a direct correlation between economic instability and the need for an increase in reading skill levels.

Reading proficiency is addressed in the No Child Left behind Act (NCLB) which requires that all students be "proficient" in reading by 2013-14 and demands that all schools make adequate yearly progress (AYP) toward that end (Daggett, 2003). With this heightened pressure to increase proficient reading and the concern for the United States workforce, how can teachers and administrators meet the demands of politicians and lawmakers?

Purpose Statement

"Forecasters have predicted that if static literacy levels continue, then by 2030 the entire Literacy Level distribution of the U.S. population will have decreased, creating an American workforce that is unequipped and unskilled to work in the demanding global market ("Facts About," 2013, p. 2). The purpose of this study was to consider ways to increase student comprehension through specific strategies of questioning and think aloud in a context of transactional instruction in a collaborative group setting in hopes of increasing literacy levels for future students.

Research Questions

1. Do the two strategies of generating questions and using think alouds in the context of transactional instruction improve reading comprehension skills in the area of analyzing and understanding a specific text?

2. Is there a greater effect when these two strategies are implemented in a collaborative, discussion-based environment?

Definition of Terms

For the purpose of this study, the following definitions were used. Unless otherwise noted, the definitions are those of the author.

(NAEP) National Assessment of Educational Progress- is the largest continuing and nationally representative assessment of what American students know and can do in core subjects.

(NWEA)Northwest Evaluation Association- is a not-for-profit organization committed to helping school districts throughout the nation improve learning for all students.

Question generation- Question generation is the purposeful posing and answering of questions about what is read, typically to make inferences or reveal details (why, how, when, where, who, etc.) and to provide specific information needed to deeply analyze a body of knowledge.

Reading comprehension- is the ability to read text, process it, and understand its meaning. An individual's ability to comprehend text is influenced by their traits and skills, one of which is the ability to make inferences.

(SAIL) Student Assistance in Learning-is a grant-funded group that includes outreach programs designed to assist low-income, first-generation, and disabled students as they proceed through the academic pipeline from middle school to post-baccalaureate programs. This program integrates the use of the transactional instruction approach.

Scaffolding- is the process of having a single, more knowledgeable person, such as a parent or a teacher, help individual learners by providing them with exactly the support they need to move forward.

Transactional Instruction Strategies- In transactional strategies instruction, teachers draw upon a small repertoire of very powerful strategies to help students derive meaning from text. Children learn to use these strategies across a variety of text types in several instructional settings, including reading groups that focus on high-quality literature.

Literature Review

There is cause for concern for today's students as their reading levels and reading proficiency plummet. According to the National Assessment of Educational Progress (NAEP) 80% of low-income 4th graders and 66 % of all 4th graders are not proficient in reading (The Annie E Casey Foundation, 2017, p 1). Because of this decline, "only one-third of all students entering high school are proficient in reading -- only about 15 percent of African American students, and 17 percent of Hispanic students" ("Facts About", 2013, p. 1). These statistics correlate with a decline in the future success of our children. Having more than half of the students never reach a proficient reading level is a major concern for our society. By 2020, the US is expected to have a shortage of workers with college degrees and a surplus of unemployed individuals who have obtained a high school diploma but lack the educational credentials to enter the workforce (The Annie E Casey Foundation, 2017, p 1).

In order to help students, deepen their understanding of a text and increase the level of reading proficiency, comprehension strategies must be taught and applied. One strategy that helps equip students to think critically about a text is called question generation. Question asking and answering can be viewed as the strategy that drives all of the other strategies. It is the process of asking and answering questions of both the text and oneself that really brings the other strategies to life (Humphries, 2013). Teaching students how and what to ask is an extremely important skill to apply; it is preparing the brain to understand what it is reading (Pressley & Afflerbach, 1995).

Three ways to help teach students how to generate questions include the following: modeling for students how and when to generate questions, providing guided practice in

questioning, and allotting students time to apply their understanding of question generation. The question generation strategy can be applied before, during, or after reading a specific text. "Teaching students to ask questions can help them become sensitive to important points in the text and thus monitor the state of their reading comprehension" (Rosenshin, Meister & Chapman, p. 183).

Rosenshin, Champan and Meister's (1996) study indicated that generating questions during reading helped improve comprehension on overall standardized tests. The researchers studied comprehension levels after teaching students how to generate questions using a number of prompts. The new material was tested using these five prompts: signal words, generic question stems, main idea of passages, question types, and story grammar categories. When given an average standardized test, the median reading comprehension score was 0.36 (64th percentile) for students. When the experimenter developed and tested based on his research, the median was 0.86 (81st percentile). This increase showed the researchers that by self-questioning students learn how to search a text and combine information for better comprehension. Rosenshin et al (1996) also found that by teaching this strategy, students were later able to apply it independently thus developing a higher level of cognitive awareness (Rosenshin, Meister & Chapman, p. 183).

Yopp and Dreher (1994) also concluded that students' overall comprehension and motivation to read improved when students learned to generate questions from text. The Yopp et al study produced significant results that supported the positive influence self-questioning had on reading comprehension and motivation. Students in the experimental group of the study were trained to self-question through modeling, prompting, and independent study. Additionally, these students were taught how to internalize questions. During the study, both in the experimental group and control group, students tracked the questions they had as they read a specific text.

Overall, students in the experimental group had a higher average of questions asked during reading. By asking and answering more questions, students in the experimental group developed a deeper comprehension of the text than those students with fewer questions. The researchers also determined that teaching students to be responsible for their learning led to an increase in personal investment, along with a higher level of student motivation. This level of motivation was a great steppingstone in improving independent reading which had a direct correlation to increasing reading proficiency (Yopp & Dreher, 1994).

As the students start to generate questions, a strategy that builds upon this skill is one that allows students to process out loud. This specific strategy is referred to as the think aloud strategy. The think aloud model uses specific processes such as making predictions, creating images, linking information with prior knowledge, monitoring comprehension, and overcoming problems with word recognition in order to build upon the knowledge of a text (Think Aloud Strategy, 2013). Think aloud can be described as the process of thinking aloud as one performs a specific task--in this case, reading. By thinking aloud through predicting, visualizing, interpreting, and clarifying a text, students are forced to slow down and take their time to understand what they reading. Researchers believe that students who applied the think aloud strategy had a more significant chance of understanding the text through a more thoughtful approach than students who jumped to conclusions and did not fully understand the meaning of the text (Duke & Pearson, 2004). By having the teacher first model self-questioning through thinking aloud, students are taught how to look at a text and how to search for relevant information.

Bereiter and Pearsons' (2009) study indicated that students tested higher in comprehension when the think aloud strategy was taught. In their study, students in 7th and 8th

grade made a 2.7 gain in grade level comprehension when using the think aloud strategy to self-question, restate, backtrack, and problem solve. Critical comprehension skills also increase with the use of the think aloud strategy. Comprehensions skills provide students with the ability to see and articulate the purpose of the story. Silven and Vauras' (1992) research found an increase in the areas of critical, interpretive, and overall reading comprehension with the think aloud strategy. Students in the experimental group of their study were taught to use the think aloud strategy while reading by predicting, picturing, comparing, identifying the problem, and using fix-up measures. Predicting involved using illustrations and titles to predict what the text being read might be about. Picturing entailed visualizing characters and settings. Comparing focused on story events and life experiences. Identifying problems covered vocabulary, misinterpretation, and misunderstanding of written material. Finally, the fix-up measures included re-reading, reading on, self-questioning, predicting and verifying, making reflections, asking whether what is read makes sense, and retelling. (Silven & Vauras, 1992). The control group simply applied the procedures that were outlined by the textbook. In a comparison of the results of both groups, the increase in comprehension for the experimental group was significant. (Silven & Vauras, 1992).

Teachers that model, support, and scaffold the previously noted techniques make a significant difference in the level of comprehension their students have when reading. Applying these strategies with various forms of transactions between the students, teachers, and text increases the number of ways a student looks at the interpretation of a story. Having multiple perspectives of text forces students to think critically of what they are reading and to the text from a variety of angles. Using multiple strategies and connecting them through a distinct transaction is referred to as Transaction Strategy Instruction. This comprehension strategy

through the transaction of a specific text activates reader's prior knowledge, allowing them to have meaningful discussions with different personal interpretations (Stahl, 2004).

In transactional instruction, the teacher guides students through the process of modeling, coaching, supporting, and practicing the various strategies. The strategies are first modeled by the teacher, such as self-questioning through the process of thinking aloud. Then through the transfer of knowledge and responsibility, the students take what they have learned and apply it in a smaller group setting. Research studies of transactional instruction has found that there are promising improvements in students' ability to use strategies that increase comprehension overtime (Duke & Pearsons, 2004).

Through research with the SAIL (Students Achieving Independent Learning) program, Pressley et al (1992) found that students who were taught through the transactional approach tested higher in their level of comprehension during standardized testing than students who did not learn through a transactional approach. In this study, teachers performed the proposed strategies and allowed students the opportunity to apply them. By teaching through the strategies and creating small interpretive communities, the SAIL group showed both short-term and long-term impacts on reading comprehension with an increase in understanding of text and a deeper connection to the story. The long-term effects for students when taught through the transaction of knowledge included having a better grasp of the strategies they were taught and how to apply them to the various text they were given (Pressley et al, 1992).

Brown et al. (1996) investigated the same use of transactional strategy instruction with a group of second grade students who performed equivalent to each other in the fall. Through the year, the group that was taught through Transactional Strategy Instruction had a significantly

deeper understanding of the text they were reading compared to the control group (Schunk & Zimmerman, 1998). Students were also more willing to read more difficult text due to the increase in understanding, connections to other stories and real life situations while collaboration with other students (Schunk & Zimmerman, 1998). These studies are encouraging as one considers ways to increase reading comprehension and reading proficiency.

In order to decrease the number of students who drop out, give up or lack the skills they need to hold a job, giving students the right tools to succeed is crucial. By teaching the two strategies of think aloud and question generation through Transactional Strategy Instruction, the potential to learn in a collaborative setting is possible.

Methods

Participants

The participants in this study were two sections of kindergarten classes at a charter school in east Michigan. Sixty-five percent of students were African American and the other 35 % were Caucasian who came from a majority of lower income families. All the students were from a Title 1 school district that is chartered by Central Michigan University. For the 2013-2014 school year, two classrooms of 20 students participated in this study. Each class divided their students into four groups based on the results of the NWEA test taken in the winter. These groups were divided into four sections: proficient, intermediate, intermediate two and novice.

Research Design

The research design was created to implement and test strategies that would enable, equip, and prepare students to identify the main idea in a story- a basic comprehension skill. A

quasi-experimental design was used for this study in order to estimate the impact of teaching

reading comprehension strategies of question generation and think aloud to a given class. As

specified in a quasi-experimental design, a pre-test (Appendix B) was given to two separate

classrooms, one being the control group and the other the experimental group. During the pre-

test, a fictional story was read and a discussion started. This pre-test template was used

throughout the three weeks as a to collect information based on the discussion, the level of

understanding, and the use of strategies. This helped to monitor students' progress over the time

the strategies were being taught. The control class continued as previously taught while the

experimental group was taught to generate questions, to think aloud, and was taught how to use a

group discussion through a gradual release as modeled by the transactional strategy instruction.

At the end of the three weeks, a post-test as given to each group that followed the same

guidelines as the pre-test. Results of the post-test were compared to the pre-test to examine

potential differences between the control and experimental groups.

Materials

A pre-test and post-test (Appendix B) were given to calculate the growth in achievement

based on the application of strategies. Two nonfiction books were selected to be read during the

pre-test and post-test, each having an emphasis on a specific moral. *The Imagine It* curriculum

and leveled books from A-Z Reader were used in the experimental group as a way of

differentiation throughout the teaching of the two reading comprehension strategies. The

curriculum as well as the A-Z Readers were an available resource to the control group

throughout the course of the research.

Procedure

Both the experimental and control group were split into four groups based on reading ability. Grouping was determined by their scores on the Northwest Evaluation Association's Common Core test (NWEA). These groups helped determined which leveled books they would be reading. Each group was given a pre-test to determine the application of the strategies and the level of comprehension. Both classes were taught using the *Imagine It* curriculum. The whole group lessons for the experimental group began with modeling the think aloud strategy, then question generation. Small groups were formed in both the control and experimental group to support and apply the strategies that each teacher taught in their whole group lesson. The experimental group were taught a minimum of three lessons a week and focused on the think aloud strategy and generating questions while in a collaborative group setting. While in the group setting, students were encouraged to ask one another questions along with building off of the other students' comments, with the hope of students learning from one another. Both strategies were stressed and implemented both during small group activities and whole group instruction and question generation and listening skills were practiced. The students in the control group were only taught the two strategies, with no focus on collaboration. In comparison, the experimental group stressed the importance of using a collaborative setting and the questions and discussion of others to answer the four comprehension questions. A post-test was given to both the experimental group and the control group to calculate the questions generated, the average amount of times each group thought aloud, and the direct effect it had on answering four basic comprehension questions. The two tests were then compared and data was collected to determine if there was any significant growth in the experimental group.

Results

A pre-test and post-test were given to students to determine the effectiveness of the study. The control group was compared to the experimental group that was taught the two specific strategies with the application of transactional instruction. The two classes were compared using the test results both before and after the three-week unit had been administered. Ongoing informal assessments were given throughout the three weeks to monitor the appropriate timing of the transactional strategy instruction from the teacher to the students. The results were compared based on the use of strategies, depth of discussion and level of understanding of the text.

Research Question One

This study sought to determine whether generating questions and think aloud in the context of transactional instruction improves reading comprehension skills in the area of analyzing and understanding a specific text. The four basic questions that were asked in order to find the level of analysis and understanding were the following: Who were the characters? What was the purpose of the story? What were three key details? What did you learn from the story? To draw a thorough conclusion of whether the application of these specified skills would improve comprehension among kindergarteners, a pre-test was given in order to compare and find a base for where the growth began. The pre-test was designed to calculate the number of times students generated questions, thought out loud, and answered four basic comprehension questions. The discussion groups were developed based on data collected by the NWEA. Group 4 in both the experimental and control group were designated as proficient. Group 1 and Group 2 were designated as on level and Group 3 was the at risk students. Figure 1 shows the number of questions generated and the number of times each group thought out loud as they proceeded

through a text. These numbers were gathered as part of the pre-test that was administered prior to

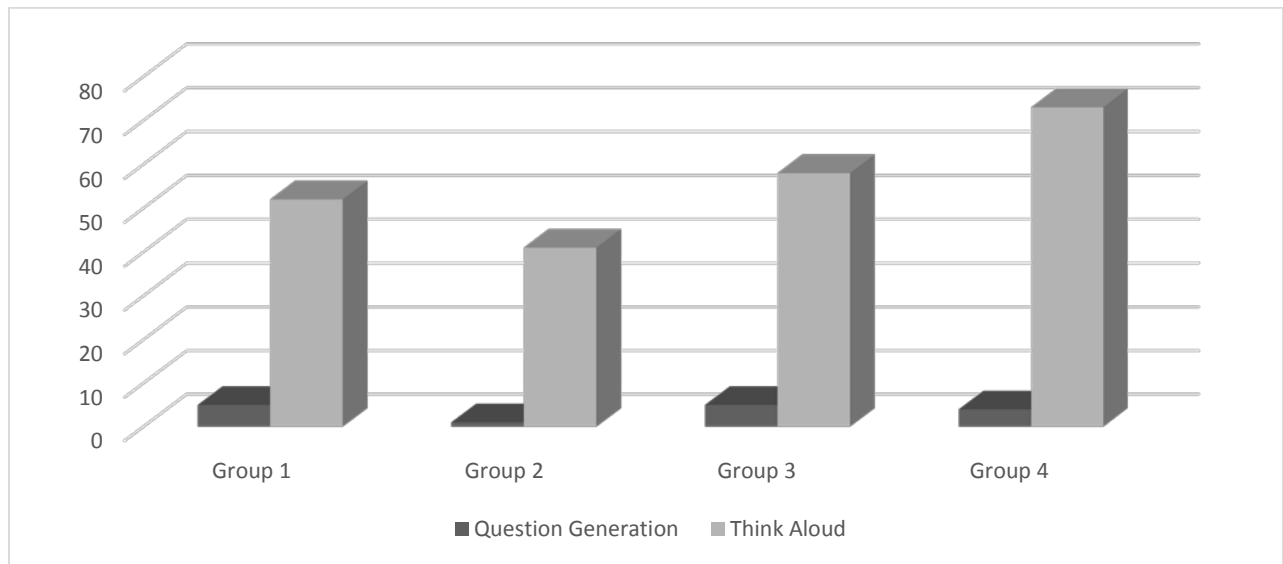teaching the strategies in the experimental classroom.

Figure 1: Bar graph showing amount of questions generated and think alouds spoken

during the pre-test given to the experimental group.

The data above shows the number of questions that were generated and times students

thought aloud during the given pre-test. Based on the information an average of four questions

were generated by the experimental group. Each group was able to answer about 50% of the

comprehension questions correctly after reading the text and applying the question generation

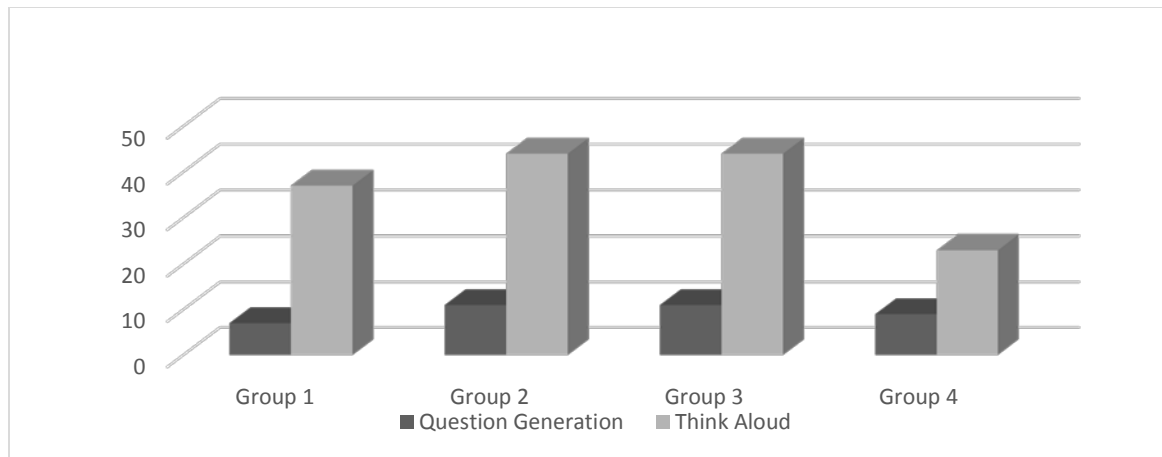and think aloud strategy to the best of their knowledge.

Figure 2: a description of the pretest scores of the control group related to question generation and think aloud strategy.

Figure 2 shows the control group was already asking on average of nine questions. They also had an average of 37 times they thought aloud while reading a specific text. Students were able to answer two of the four basic comprehension questions that were asked after the text was read.

Figure 1 and Figure 2 show that the control group had a higher average of questions generated with nine while the experimental group was only at four questions in the pretest. On the other hand, the experimental group had an average of 56 times where the group collaborated and thought out loud whereas the control group had an average of 37.

Table 1

Analysis of Questions Generated

Variable	Group 1	Group 2	Group 3	Group 4
Pre-Test	5	1	5	4
Post Test	22	24	11	29

Table 1 shows the results of the experimental group comparing their pre-test and post-test results. In all four groups, there was a significant increase in the questions generated. There was almost a 900 % increase in the number of questions asked. Group 4 and Group 2 made the most significant gains with almost 25 more questions begin generated. Group 1 asked 17 questions while Group 6 although making the least amount of growth with 6 questions, still increased in overall questions created.

Table 2

Analysis of the Think Aloud Strategy

Variable	Group 1	Group 2	Group 3	Group 4
Pre-test	52	41	58	73
Post Test	55	40	56	80

In comparison to the question generation strategy, the think aloud strategy only made a 2% gain overall in the experimental group from the pretest to the post test. Group 1 made a 6 % gain while Group 4 really worked to apply the new strategy and made a 10% gain. Group 2 and Group 3 had a decreased growth of -2% and -3% from the pre-test to post test.

Table 3

Post- Test Analysis: Question Generation

Variable	Strategy	Group 1	Group 2	Group 3	Group 4
Control Group					
	Question Generation	1	3	0	7
Experimental Group					
	Question Generation	22	24	11	29

When comparing the data for the control group versus the experimental group at the end of the post-test there was a significant growth in the questions generated in the experimental group compared to the control group. The experimental group asked on average 21.5 questions, whereas the control group fewer than 10. In Group 1, the control group was able to generate only one question whereas the experimental group asked almost 20 more questions. In comparison, Group 2 had the same difference between the control group and the experimental group, with around 20 more questions being asked by the experimental group. Group 3 struggled in both strategies compared to the other three groups with no questions being asked by the control group and only 11 by the experimental group. Group 4 had a difference of 22 questions between the control group and the experimental group.

Table 4

Post- Test Analysis: Think Aloud

Variable	Strategy	Group 1	Group 2	Group 3	Group 4
Control Group					
	Think Aloud	34	34	61	62
Experimental Group					
	Think Aloud	55	40	56	80

In comparison, the control group increased 29% in thinking aloud versus a 3% increase for the experimental group. When applying these two strategies the ultimate goal is to increase the comprehension of the readers. When given, the comprehension questions the experimental group answered 11 out of the 16 comprehension questions correctly while control group answered 10 out of the 16 questions correctly. This shows that although the experimental group was able to generate more questions for the group to respond to and collaborate about, this technique did not ultimately enable students to better comprehend what they were reading.

Discussion

Overview of the Study

The main focus of the study was to determine whether teaching generating questions and the think aloud strategy within the context of transactional instruction would improve comprehension skills in analyzing a specific text with the hope of increasing overall reading proficiency. In order to answer this, two strategies, question generation and the think aloud, were

modeled, practiced and implemented using the transactional instruction strategy. Progress was

monitored and a post-test was given in order to calculate the results.

Analysis of Findings

Based on the data collected from the pre-test, the control group asked on average 9.5

questions while the experimental group asked an average of four. This average shows what

students were applying from previously learned skills. The growth in the number of questions

asked by the experimental group during the post test, caused this researcher to draw the

conclusion that when taught this specific strategy, students were able to comprehend it and apply

it. In terms of thinking aloud, the experimental group discussed what they saw 19 more times

than the control group. Application began with teaching, modeling, and applying the think aloud

strategy while generating questions within a group discussion. In determining the increase of

reading comprehension, questions were asked in order to determine the amount of knowledge

that was obtained throughout the process. Consistently, in both the control group and

experimental group, an average of 40% of students were able to express the theme of the story.

Each group was able to establish and recall several key details, but overall comprehension of the

main idea was lost in the details of the story. When implementing the transactional instructional

strategy, several building blocks were required in order for a successful discussion to occur.

Based on observation, the students who performed higher on standardized tests, such as the

NWEA, were capable of a more intricate discussion than those who scored lower. Group 4 in

both the experimental and control group were students who scored higher on the NWEA. These

students were more likely to answer questions asked by students in their group and give evidence

to where they saw the answer within the text. This form of discussion lead to a higher level of

understanding for all students within the group. The application of question generation and think aloud made for a good discussion and conversation for these students.

Most students in kindergarten are still developing the skills they need to listen, share, answer, question, and recall. Group 3 struggled in all areas of comprehension before and after the pretest. They decreased by 3 % in applying the think aloud strategy and although they increased in question generation, compared to the other three groups, they only asked half as many questions.

This study found that basic skills not only have to be taught and discussed but practiced. Also, due to the length of the experiment, an inaccurate reading was made because of the number of individual skills that needed to be built upon in order for a cohesive and meaningful discussion to occur. Students in Group 3 were unable to listen to a question and respond to it. The concept of a question was taught for far longer to this group than Groups 4, 2 and 1. The immediate effects of learning these skills are yet to be determined based on the cognitive level of understanding and development of the test subjects.

Limitations of the Study

Based on the data collected, teaching students specific strategies can help in the application of these required skills. Unfortunately, more time is needed to teach students how to think through questions and answer them based on the information they see, observe, and hear other students communicating. Even so, this strategy did increase the participants' capability in creating questions when working with the writing specialist. When asked to generate a question based on a specific theme, observations by specialist concluded that the experimental group was 5 times more likely to create a question that related to the overall theme of the lesson and

articulate the question correctly versus the control group. The discussions for both groups were based on the various students who were placed within the group. Dominance in personality drove the discussion, and a leader was naturally established in multiple groups. This "leader" directed the discussion and the focus of what was being seen, taught and discussed. This created a limitation in the growth of some groups. In group 4 the leader established himself with a good understanding of the strategies and the group followed suit; whereas, the leader in group 3 struggled a bit and those followers stayed just as confused.

Weather was also a factor in this research study. During the implementation of the treatment, several snow days were called. A total of 12 days were missed during this time of instruction. This lack of consistency caused for a lot of time to be spent going over the rules of the classroom and reteaching the ideas and concepts that had been presented earlier.

Recommendations for Further Research

Considering future research on these strategies, more time should be applied in order to reach the full potential of each skill. Observing and teaching each building block that aligns the most efficient use of each strategy is important. There are also areas that could be improved in regards to tracking progress. For instance, keeping a consistence tracking sheet, such as a class grid, to monitor progress each time these small groups met would enable the teacher to watch and make quicker modifications to the lessons dependent on what each group of students was understanding. Spending a full year teaching the building blocks of asking questions, working with others, listening, sharing is key. Laying out a full year long plan would be crucial in teaching and testing these strategies. Such a plan would give researchers and students a timeline along with a measuring tool to adjust teaching of these strategies in the future.

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Appendix A

Tracking Sheet of Strategies Used During Group Time

Group _____   Experimental Group/ Control Group

Questions-

Think Aloud-

Discussion/ Comments-

Understanding-

Questions-

Think Aloud-

Discussion/ Comments-

Understanding-

Student 1   Student 2

Questions-

Think Aloud-

Teacher   Student 3

Discussion/ Comments-

Understanding-

Student 4   Student 5

Questions-

Think Aloud-

Discussion/ Comments-

Understanding-

Questions-

Think Aloud-

Discussion/ Comments-

Understanding-

Appendix B

Pre-Test and Post Test Tracking Sheet

Pre-test Post test	Control Group				Experimental Group			
	Group 1	Group 2	Group 3	Group 4	Group 1	Group 2	Group 3	Group 4
Question Generation (tally, examples)								
Think aloud -level of reading -tally of students of thought out loud								
Group Discussion -How many students are talking								
-# of times teacher had to guide, direct								
Understanding of story								

- With a partner ask them their favorite thing to eat
- Share out what partner said
- With a partner ask them a question you want to know
- Share out what the question was and what their response was
- Procedure