IMPROVING READING COMPREHENSION
THROUGH HIGHER-ORDER THINKING SKILLS

Brigitte A. McKown, B.S.
Cynthia L. Barnett, B.S.

A Research Project Submitted to the Graduate Faculty of the

School of Education in Partial Fulfillment of the

Requirements for the Degree of Master of Arts

Saint Xavier University

Chicago, Illinois

May 2007

ABSTRACT

This action research project was conducted to improve reading comprehension with second grade and third grade students. The teacher researchers intended to improve reading comprehension by using higher-order thinking skills such as predicting, making connections, visualizing, inferring, questioning, and summarizing. In their classrooms the teacher researchers modeled these strategies through the think-aloud process and graphic organizers. This was followed by students using these strategies through whole class, small group, and independent practice.

The teacher researchers gathered information prior to implementing the reading strategy interventions. The Metacomprehension Strategy Index indicated a lack of student knowledge of strategies to use before, during, and after reading. The State Snapshot of Early Literacy given to the second grade students identified 9 of the 16 students below target level. The Test Ready Test given to the third grade students indicated 10 of the 17 students were at risk for reading comprehension failure.

The information gathered by the teacher researchers after the interventions had been modeled and practiced showed improvement with the second and third grade students. The post-intervention scores for the Metacomprehension Strategy Index showed a significant increase in students' knowledge of the reading comprehension strategies. The State Snapshot of Early Literacy post-intervention scores indicated only 6 of the 16 second grade students remained below target level for reading comprehension. The Test Ready Test given to third grade students indicated only 2 of the 16 students had post-intervention scores that were at risk for reading comprehension failure.

TABLE OF CONTENTS

CHAPTER 1

PROBLEM STATEMENT AND CONTEXT

General Statement of the Problem

In this study the target groups were students in a second grade classroom and students in a third grade classroom. The teacher researchers have seen children experience difficulty with the process of reading comprehension, which causes them great concern as educators. The researchers feel more time is typically spent teaching students how to do the worksheets, instead of teaching reading strategies to improve reading comprehension. Through the teacher researchers' observations and students' written responses on comprehension worksheets, evidence has been found that their students struggled to derive meaning from the text they have read.

Immediate Problem Context

This research project was conducted at one site, an elementary school, with a population of 493 students, (Interactive State Report Card, 2005). The school consisted of 92.3% Caucasian, 1.8% Hispanic, 3.9% African American, 0.8% Native American, 1.0% Asian as reported by the 2005 State District Report Card (SDRC). The 2005 SDRC reported that 21.3% of the students were eligible to receive free or reduced-price lunches based on the number of families receiving public aid at the school. There were no students at the school with English as a second language and there were 52% male and 48% female students in the school's student body (SDRC, 2005).

The teachers at the school had an average of 14.5 years of experience, with 66.1% having a bachelor's degree and 33.9% having a master's degree and above, as stated in the 2005 SDRC. The teaching staff at the school was 100% Caucasian with 15.3% male and 84.7% female. The school had an average class size of 24.0 at the kindergarten level, 17.0 at the first grade level, and 19.3 at the third grade level. The pupil to teacher ratio was 16:7 at the school (SDRC, 2005).

The administrative staff at the school consisted of one superintendent and one principal. The teaching staff at this school consisted of 25 full-time classroom teachers, four special education teachers, three Title I reading teachers, one art teacher, one physical education teacher, and one music teacher. The support staff consisted of several office workers, two kindergarten aides, two computer technicians, one librarian, six special education assistants, kitchen, and custodial staff.

The teacher researchers feel that reading comprehension is the basis for how students perform in all subjects. The third grade students at the school scored 80.7% on reading, 94.7% on math according to the 2004-2005 SSAT (SDRC, 2005). Students in Grade 4 scored 90% in Science on the 2004-2005 SSAT. Students in Grade 5 scored 64.4% in reading, and 68.9% in math on the 2004-2005 SSAT according to the State District Report Card. The researchers found the drop in reading scores from third to fifth grade significant.

Each year the school board and administration required the teachers at the school to develop a school improvement plan that included Level I, Level II, and Level III. At Level I teachers were to develop an individualized plan using available data, such as SSAT and Scholastic Testing Services Achievement Test scores and/or classroom observations, to address a student's strengths or weaknesses.

For Level II, teachers at each grade level were to use available data to develop grade level goals to improve class deficiencies or accelerate strengths. Individual teachers were to develop Level III goals for self-improvement or curriculum improvement in their classrooms.

<p style="text-align:center">Surrounding Community</p>

The school is located in a suburban village community in a Midwestern state. According to the 2000 U.S. Census Bureau, the population of this village is about 6,154 people, with a 98.1% Caucasian population. The average income is around $40 thousand per year, per family. According to the U.S. Census Bureau, the average household is 2.43 persons. Private-for-profit wage and salary workers make up 79.2% of the community's population. The majority of the community members are blue-collar workers. Ten percent of the residents in this community have a bachelor's degree or higher level of education.

There are eight schools including the research site that feed into one high school in this community. The mission statement of the research site is, "To work with parents and the community to prepare students for tomorrow while enjoying and understanding today through the use of current knowledge, skills, and technology" (School Improvement Plan, 2001, p.1). The school has a truancy rate of 0.0%, a mobility rate of 18.9%, and an attendance rate of 96.1% (SBE, 2005). This school earned the Bright Star Award for the 2004-2005 school year. This is awarded to schools for high student performance on SSAT with low student cost.

<p style="text-align:center">National Context of the Problem</p>

Reading comprehension has been a major issue for more than 20 years. Researchers have found that teaching reading strategies is important to developing increased student comprehension. At the same time, they have found many teachers lack a solid foundation for teaching these reading comprehension strategies (National Reading Panel, 2005). Therefore,

teachers need to be prepared, through professional development, on how to design effective comprehension strategies and how to teach these strategies to their students. Improving reading skills is a top priority for all educators. This is reflected at the national level in the No Child Left Behind Act. The result of the No Child Left Behind Act is a new program called Reading First (U.S. Department of Education, 2005). This program provides funding to help states and local school districts improve reading comprehension instruction for students in kindergarten through Grade 3.

The area of focus for this research project is improving reading comprehension through the use of higher-order thinking skills. Without a solid foundation of reading skills the teacher researchers feel children will struggle throughout their schooling and adult life. By learning the best comprehension strategies and how to best teach these strategies to the students, the researchers hope to provide the solid foundation needed to succeed. Although the school has received scores on SSAT that meet or exceed, the teacher researchers feel there is room for improvement. In reading, the third grade students scored 80%, but scores dropped in fifth grade to a 64.4% (SDRC, 2005). The researchers have questioned if the scores decreased because the students' higher-order thinking skills have not been developed or mastered. In their study, the teacher researchers hoped to incorporate higher-order thinking skills to increase reading test scores and develop a more meaningful reading experience for the students.

Reflection

As the second grade teacher of this research team, I (Teacher A) feel that I am constantly evaluating the lessons I teach to my students. Through this self-evaluation I have started searching for answers to areas of difficulty I see reoccurring in my classroom. I chose the topic of improving reading comprehension through higher-order thinking skills because it is one of the

problem areas that I see occurring year after year in my classroom. In second grade our main focus is on comprehending the written word. So many times children come to second grade impressed with how well they read the words, but they do not transfer good fluency into a good understanding of what they read. As a second grade teacher, I feel one of the most important tasks I have is to help students develop strategies to comprehend the material they read. My research partner and I chose to work together because we are in the same school district, work well together, and we both identified reading comprehension as the area of concern we wanted to focus on for our research project.

As the third grade teacher in this research team, I (Teacher B) find many of my students in third grade are able to read fluently, but they still have difficulty answering the "how" and "why" of what they have read. I am hoping that by incorporating higher-order thinking skills, my students would be able to transfer and make connections to reading. This is so important in order for a child to be successful. I felt that incorporating reading strategies and showing students how to reflect about what they have read, would improve their reading comprehension. My research partner and I feel very strongly about our students improving their reading comprehension and to become life-long learners. I was looking forward to working on this area of concern, and sharing our findings with our co-workers.

CHAPTER 2

PROBLEM DOCUMENTATION

Problem Evidence

Reading proficiency is the most fundamental skill critical to most, if not all, academic

learning and success in school. In the United States the ability to read proficiently is

significantly related to how much a person can achieve in his or her personal and

professional life (Block & Israel, 2005, p. 2).

The teacher researchers agree that reading proficiency is an important skill, unfortunately,

according to the Nation's Report Card in 2005, only 30 % of fourth grade students were

proficient or advanced in reading (National Center for Educational Statistics, 2005). Thirty-eight

percent of fourth grade students are reading below basic level, which constitutes illiteracy (Block
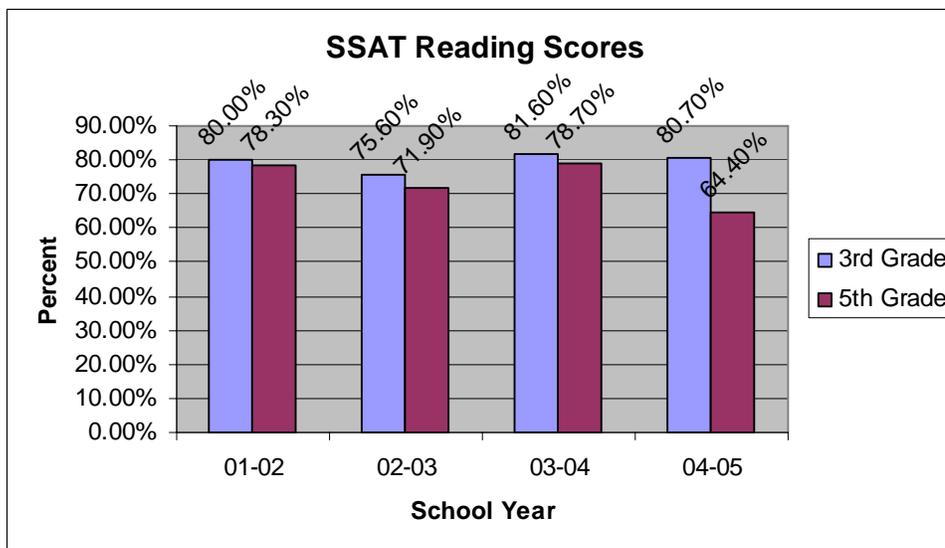
& Israel, 2005).

Figure 1. State Standardized Achievement Test Reading Scores for research school site.

The teacher researchers, in this research project, noticed at their school a drop in reading scores from third to fifth grade over the last few years (see Figure 1). Part of the reading proficiency problem is the inability to decode and comprehend simultaneously. Block, Gambrell, and Pressley (2002), claim that many children cannot decode and comprehend simultaneously by second grade. If by third grade students have not mastered decoding and comprehending simultaneously, continuing to teach reading in the same way will not result in an increase in their reading comprehension (Block, Gambrell, & Pressley, 2002).

Parental consent (see Appendix A) was obtained for this research project during the last week in August. To show evidence of a problem in reading comprehension the teacher researchers orally surveyed their second and third grade students using the Metacomprehension Strategy Index (see Appendix B). During the first week in September, both teachers administered this oral survey to their students.

The survey measured each student's awareness of the strategies used in the reading process. The teacher researchers read one part of the survey per day for three consecutive days. The Metacomprehension Strategy Index (MSI) had a total of 25 questions divided into three parts that asked about the strategies students used to help them better understand a story.
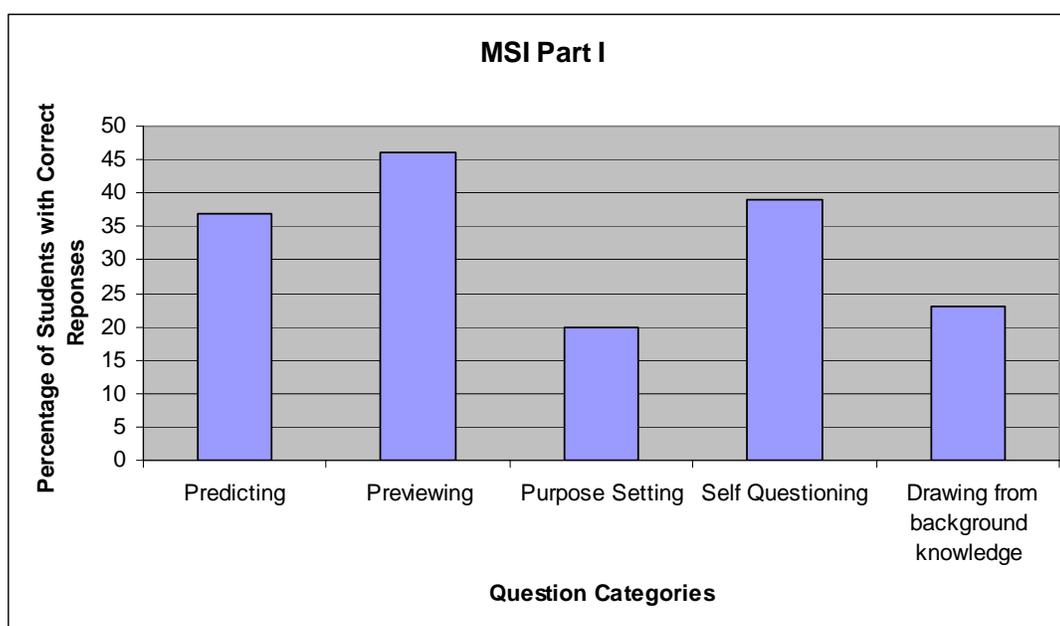

Figure 2. Percentages of correct responses for the Metacomprehension Strategy Index by the targeted second and third grade students.

Part one consisted of statements about the strategies used prior to reading a story. The teacher researchers combined the results of the second and third grade classrooms from Part One of the MSI as seen in (Figure 2). The results indicated 37% of students were able to correctly answer the predicting questions. Forty-six percent of the students were able to correctly answer the previewing questions. Twenty percent of the students were able to correctly answer purpose setting questions. Thirty-nine percent of the students correctly answered the questions for the category of self-questioning. Twenty-three percent of the students were able to correctly answer the drawing from background knowledge questions.

MSI Part II

Figure 3. Percentage of correct responses for the Metacomprehension Strategy Index by the targeted second and third grade students.

Part two of the MSI consisted of statements about the strategies used while reading a story. The results, as seen in Figure 3, showed that 27% of the students correctly answered predicting questions. Fifteen percent of the students correctly answered questions in the self-questioning category. There were 27% of the students with correct responses for drawing from background knowledge questions. In the summarizing category, 25% of the students answered the questions with correct responses.

MSI Part III

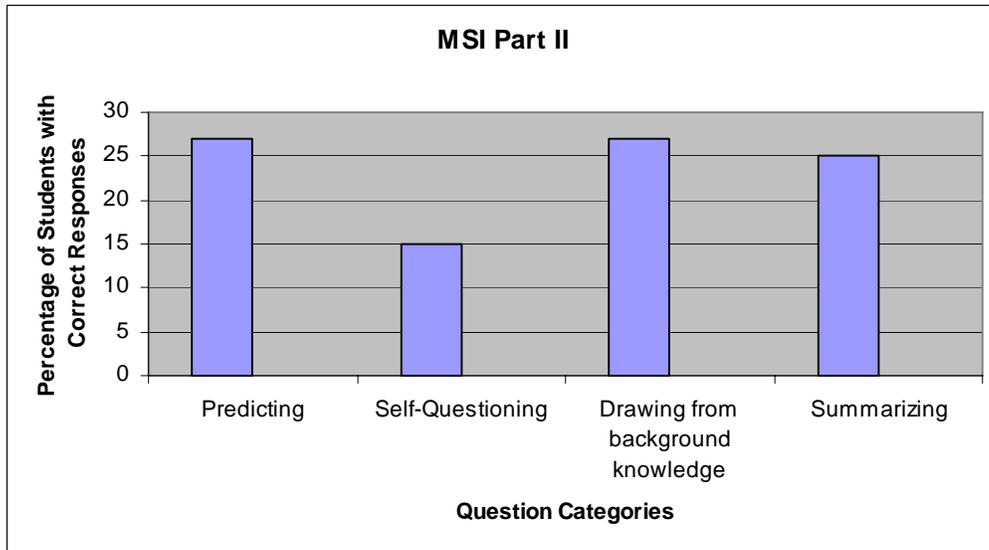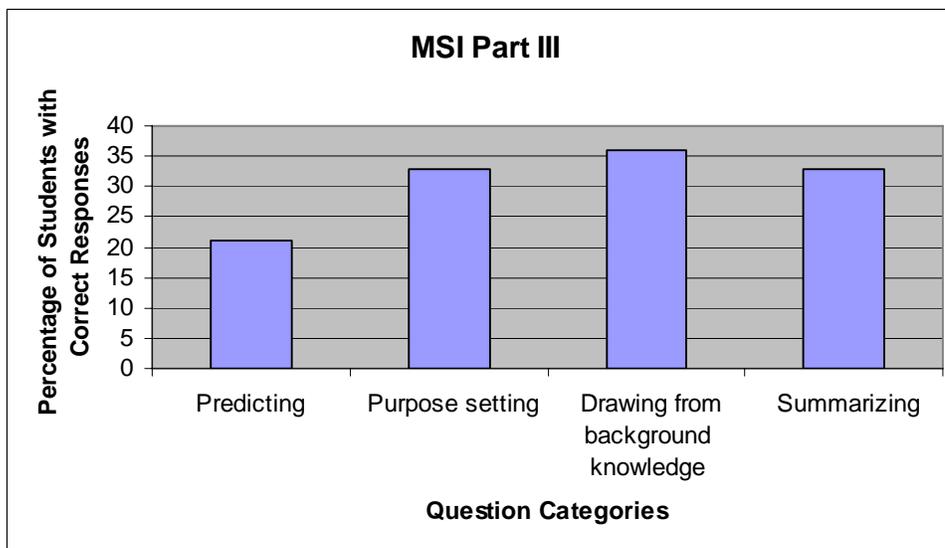Figure 4. Percentages of the correct responses for the Metacomprehension Strategy Index by the targeted second and third grade students.

Part three of the MSI consisted of statements about the strategies used after reading a story. The results, as seen in Figure 4, indicated 21% of the students correctly answered predicting questions. Thirty-three percent of the students correctly answered the purpose setting and the summarizing questions. Thirty-six percent of the students correctly answered the questions in the drawing from background knowledge category.

The researchers also gathered scores on the State Snapshots of Early Literacy (SSEL) for the second grade level and at the third grade level with the Test Ready's Practice Reading Comprehension Test. Both tests were given in early September and measured story comprehension through short answer questions.

State Snapshots of Early Literacy: Grade 2
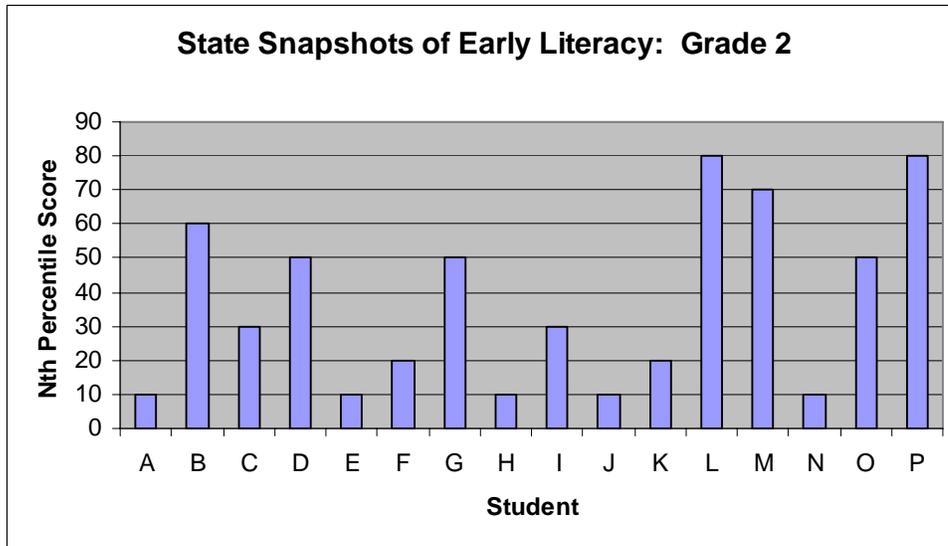
Figure 5. Percentile scores of the targeted second graders for the short answer passage comprehension section of the State Snapshot of Early Literacy.

According to the teacher's guide of the SSEL (Barr, 2004) students achieving the 50th percentile are on target for their grade level. Students at the 20th percentile or below are at a level to be watched for failure. The test results showed scores ranging from the lowest percentile to the highest percentile (see Figure 5). Of the 16 students tested, 7 of the students were at or above the target level for second grade. Two students scored between the 20th and 50th percentile. Seven students scored at the 20th percentile or below.

Figure 6. Percentage scores for the targeted third grade students of the Test Ready's Practice Reading Comprehension Test

On the Test Ready Pre-Test, a 70% is considered on target for third grade. The results of the test indicated that 2 out of 17 students had sc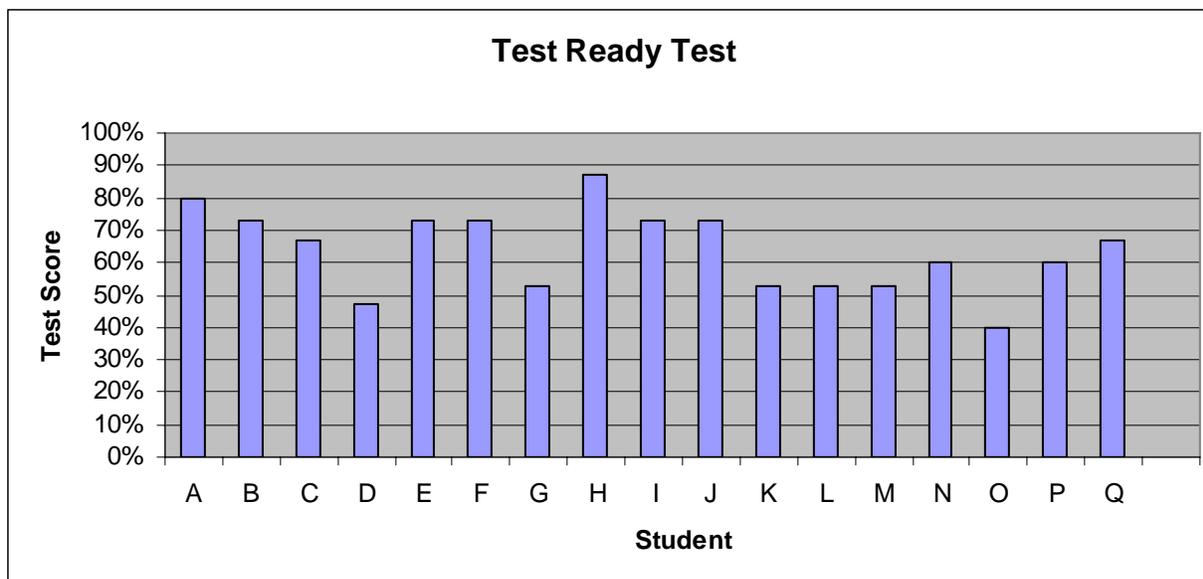ored an 80% or above. Five students scored between 70 and 79%. The remaining 10 students scored 69% or below which indicated students were at risk for reading comprehension failure (See Figure 6).

<div align="center">Probable Causes</div>

The National Reading Panel identified the areas of phonemic awareness, phonics, fluency, vocabulary, comprehension strategies, teacher education, and metacognition as important components to improving reading scores across the nation (NRP, 2000).

Phonemic Awareness

"Phonemic awareness is the ability to hear, identify, and manipulate individual sounds in spoken words," and plays a key role in learning to read (Block and Israel, 2005 p. 29). "Phonemic awareness can be taught and learned" (Adler, 2001, p. 5). According to the National Reading Panel (2000), teaching phonemic awareness to children who are beginning readers and disabled readers proved beneficial. Children from various socioeconomic levels and English as a

second language students also benefited from phonemic awareness instruction (NRP, 2000).

Teaching phonemic awareness is important because it "improves children's word reading and

reading comprehension" (Adler, 2001, p.10).

Phonics

    "Phonics instruction helps children learn the relationships between the letters of written

language and the sounds of spoken language" (Adler, 2001, p.12). Children learn that each

consonant letter represents a sound. As children advance they learn about the vowels and the

various sounds associated with each vowel. "Systematic and explicit phonics instruction is more

effective than non-systematic or no phonics instruction" (Adler, 2001, p.13). Many teachers

accomplish this by teaching letter-sound relationships in an organized sequence. Some of the

benefits of systematic and explicit phonics instruction are increased word recognition, spelling,

and reading comprehension among students. Children from various social and economic levels

and those experiencing reading difficulties also benefit from a systematic and explicit phonics

program (Adler, 2001). Although phonics instruction is not an entire reading program for

beginning readers, it is most beneficial when introduced at an early age (Adler, 2001).

Fluency

"Fluency is the ability to read a text accurately and quickly. It is important because it frees students to understand what they read" (Adler, 2001, p.31). According to the National Center for Education Statistics (1995), 44% of fourth graders were not fluently reading grade level stories even though the stories were read twice silently before reading the material aloud for testing. Teachers can help develop reading fluency by modeling fluent reading for their students. Having students practice repeated oral reading is another way to improve fluency (Adler, 2001). As students improve their reading fluency, they also start creating mental images of what they read, which helps in the understanding of the text (Block &Israel, 2005).

Vocabulary

"Vocabulary refers to the words that we must know to communicate effectively" (Adler, 2001, p.34). Vocabulary can be learned indirectly through daily communication, listening to adults read to them, and reading on their own. Students from a lower socioeconomic class have a significantly smaller vocabulary to draw from when reading due to a lack of indirect vocabulary instruction, which negatively impacts reading comprehension (Block & Israel, 2005). Vocabulary can also be learned through direct instruction. Directly teaching vocabulary words in context and word-learning strategies improves both vocabulary and reading comprehension (Block & Israel, 2005).

Comprehension Instruction

Reading comprehension is the thinking process used to make meaning of what a person reads (Block, Gambrell, & Presley, 2002). Research has shown that teachers spend very little time teaching comprehension strategies. Instead, they focus on asking literal questions, assigning workbook pages, and giving directions (Block & Israel, 2005). According to *Put Reading First*

developed by the Center for the Improvement of Early Reading Achievement (CIERA), multiple

research studies have indicated improved reading comprehension by implementing various

reading strategies (Adler, 2001). Comprehension strategies which include modeling, the think-

aloud process, inferring, summarizing, making connections, questioning, and predicting should

be implemented as early as kindergarten (Block & Israel 2005).

Teacher Education

    A considerable amount of teacher preparation is needed to effectively teach reading

comprehension. As early as the pre-service level, teacher education should provide extensive

instruction on how to teach comprehension strategies in the classroom (NRP, 2000). "Serious

questions abound about teachers' knowledge of how to teach comprehension to struggling

readers. These concerns are as current in 2000 as they were twenty years before" (Block,

Gambrell, & Pressley, 2002, p. 328).

Metacognition

    "Metacognition is an awareness of and knowledge about strategies for planning, monitoring,

and controlling one's own learning" (Block, Gambrell, & Pressley, 2002, p. 327). Good readers

use metacognitive strategies to think about and control their reading before, during, and after

reading a selection. Students who do not use metacognitive skills are usually low-achievers in

reading. These students quit trying because they believe their efforts will not pay off, or they fail

to recognize when they no longer understand what they are reading. For students to achieve

metacognition, teachers must make additions to their literacy program by teaching students to be

thoughtful and aware of their own thinking (Block & Israel, 2005).

Although all of these factors influence reading comprehension, the teacher researchers'

interventions in this project focused on modeling, the think-aloud process, visualizing, inferring,

summarizing, making connections, predicting, questioning, and metacognition strategies.

CHAPTER 3

THE SOLUTION STRATEGY

Literature Review

"The goal of all readers should be to understand what they read" (Teele, 2004, p. 92).

Research shows good readers are actively involved with the text, and they are aware of the

processes they use to understand what they read. Teachers can help improve student

comprehension through instruction of reading strategies. Predicting, making connections,

visualizing, inferring, questioning, and summarizing are strategies shown by research to improve

reading comprehension (Block & Israel, 2005). It is important to teach the strategies by naming

the strategy and how it should be used, modeling through the think-aloud process, group

practice, partner practice, and independent use of the strategy (Duke & Pearson, 2005).

Predicting

Good readers have a purpose for reading. One strategy for improving comprehension is

predicting, which helps the reader set a purpose for their reading. This strategy also allows for

more student interaction, which increases student interest and improves their understanding of

the text (Oczkus, 2003). An important aspect in the prediction process is comparing the

prediction to the outcome in the actual text. Without this aspect of the prediction process, it

becomes meaningless to improving the student's comprehension (Duke & Pearson, 2005).

Some of the approaches for teaching predicting are teacher modeling, predicting throughout the text, with partners, with a graphic organizer, or using post-it notes throughout the text. Using the title, table of contents, pictures, and key words is one prediction strategy. Another key prediction strategy is to have students predict at specific points through the text, evaluate the prediction, and revise predictions if necessary (Teele, 2004).

Making Connections

Research has shown that good readers use their experiences and knowledge to make predictions and formulate ideas as they read (Block & Israel, 2005). This strategy could be instructed by making comparisons, teacher modeling, using graphic organizers, think-pair-share, and teacher questioning. Students can make text-to-self connections through drawing, making a chart, or writing. Teachers might ask students if they have ever experienced anything like the events in the text. Students can make text-to-text connections through drawing, making a chart, writing, and graphic organizers. These text-to-text connections could be based upon how characters in the story relate to each other, or how story elements relate between stories. Students can make text-to-world connections through drawing, making a chart, writing, or graphic organizers. Text-to-world connections could be done by comparing characters in a story to characters today, or comparing the content of the text to the world today (Teele, 2004).

Visualizing

Another strategy, good readers employ when comprehending text is visualization (Adler, 2001). Visualization requires the reader to construct an image of what is read. This image is stored in the reader's memory as a representation of the reader's interpretation of the text (National Reading Panel, 2000). Students can practice the visualization strategy by writing and drawing or drawing and writing. Teachers have students visualize settings, characters, and actions in a story.

Inferring

Inferring refers to reading between the lines. Students need to use their own knowledge along with information from the text to draw their own conclusions (Serafini, 2004). Through inferring students will be able to draw conclusions, make predictions, identify underlying themes, use information to create meaning from text, and use pictures to create meaning (Harvey & Goudvis, 2000). Students can be taught to use illustrations, graphs, and titles from the text to make inferences. One method used for inferring is the double-entry notebook. Students can record ideas in one column and evidence from the text in the second column.

Questioning

Questioning is a process readers use before, during, and after reading. The questioning process requires readers to ask questions of themselves to construct meaning, enhance understanding, find answers, solve problems, find information, and discover new information (Harvey & Goudvis, 2000). Teachers need to ask students questions during and after reading a passage. Students are asked to return to the text to find the answer to questions. The teachers model and the students practice to discriminate between questions that are literal, inferred, or based on the reader's prior knowledge. Children are taught to generate questions during reading

and evaluate questions as literal, inferential, or based on prior knowledge. By using the student

generated questioning strategy, text segments are integrated and thereby improving reading

comprehension (NRP, 2000).

Summarizing

The process of summarization requires the reader to determine what is important when

reading and to condense the information in the readers own words (Adler, 2001). Teacher

modeling and student practice of the summarization process has proven effective for improving

students' ability to summarize text and to improve text comprehension. Students can be taught to

identify main ideas, connect the main ideas, eliminate redundant and unnecessary information,

and remember what they read with the summarization strategy.

<center>Project Objectives and Processes</center>

The project objectives were to improve reading comprehension of students in a regular

division second grade classroom and a regular division third grade classroom as a result of

teacher modeling, the teacher think-aloud process, and student practice of the six comprehension

strategies, predicting, making connections, visualizing, inferring, questioning, and summarizing.

The teachers introduced one comprehension strategy at a time. Following the teacher modeling

and the think-aloud process, the teacher researchers had students practice the comprehension

strategy in a whole class setting. Researchers have also found that graphic organizers help

students store information into long-term memory and give them a visual image of the story

(Teele, 2004). The teacher researchers introduced and modeled a graphic organizer that was used

with each comprehension strategy. After each strategy was modeled and practiced in a whole

class setting, the students practiced in small groups and independently. The teacher researchers

modeled the use of journaling to record the comprehension strategies that were used and how it

helped give meaning to the text. Research shows students improve comprehension when they

analyze which strategy they are using and how it helps bring meaning to the text. One tool to

accomplish this task is journal writing (Block, Gambrell, & Presseley, 2002). Following the

teacher modeling, the students independently used the journal to record the comprehension

strategy they used, and how it helped give meaning to the text. These interventions were

implemented during the period of August 28, 2006 through January 2007.

Project Action Plan

August 28, 2006- September 1, 2006
- Both teachers will copy parent consent form and send home with students.
- Both teachers will monitor the return of consent forms.
- Both teachers will copy the Metacomprehension Strategy Index (MSI).
- Both teachers will distribute the MSI to students during reading class.
- Both teachers will read one section per day for three consecutive days on the MSI.
- Students will complete the MSI while teachers read the survey.
- Both teachers will collect daily and score the MSI.
- Teacher A will administer the State Snapshots of Early Literacy Form A to second grade students.
- Teacher B will administer Test Ready's Practice Reading Comprehension Test to third grade students.

Implementation

September 4-8, 2006
- Both teachers will score their tests.
- Both teachers will analyze MSI data.
- Both teachers will begin modeling the think-aloud process for the predicting strategy.
- Both teachers will introduce a predicting graphic organizer.
- Both teachers will analyze SSEL & Test Ready's Practice Reading Comprehension Test data.
- Both teachers will continue modeling the think-aloud process for the predicting strategy.
- Both teachers will have students practice predicting strategy.
- Both teachers will have the whole class practice using a predicting graphic organizer.

September 11-15
- School Wide Testing

September 18-22, 2006
- Both teachers will begin modeling and do the think-aloud process for the making connections strategy.
- Both teachers will have students practice predicting strategy.
- Both teachers will have students use a predicting graphic organizer.
- Both teachers will model using a making connections graphic organizer.

September 25-29, 2006
- Both teachers will continue modeling and do the think-aloud process for the predicting and making connection strategies.
- Both teachers will have students practice predicting strategy.
- Both teachers will have students practice making connections strategy.
- Both teachers will have the whole class practice using a making connections graphic organizer.

October 2-6, 2006
- Both teachers will begin modeling and do the think-aloud process for the visualizing strategy.
- Both teachers will continue modeling and do the think-aloud process for the predicting and making connection strategies.
- Both teachers will have students practice predicting and making connections strategies.
- Both teachers will have students practice using a making connections graphic organizer.

October 9-13, 2006
- Both teachers will continue modeling and do the think-aloud process for the visualizing and making connection strategies.
- Both teachers will have students practice predicting, and making connections strategies.
- Both teachers will use a teacher observation checklist of student's use of comprehension strategies.
- Both teachers will model a visualizing graphic organizer.

October 16-20, 2006
- Both teachers will begin modeling thick and thin questions.
- Both teachers will continue to model and do the think-aloud process for visualizing.
- Both teachers will have students practice predicting, making connections, and visualizing strategies.
- Both teachers will have the whole class practice using a visualizing graphic organizer.

October 23-27, 2006
- Both teachers will continue to model thick and thin questions.
- Both teachers will have students practice predicting, making connections, and visualizing strategies.
- Both teachers will have students use an visualizing graphic organizer.

October 30-November 3, 2006
- Both teachers will begin modeling and do the think-aloud process for the inferring strategy.
- Both teachers will have students practice predicting, making connections, visualizing, and questioning strategies.
- Both teachers will model using a graphic organizer for inferring.

November 6-10, 2006
- Both teachers will continue modeling and do the think-aloud process for the inferring strategy.
- Both teachers will have students practice predicting, making connections, visualizing, and questioning strategies.
- Both teachers will use a teacher observation checklist of student's use of comprehension strategies.
- Both teachers will have the whole class practice using a graphic organizer for inferring.

November 13-17, 2006
- Both teachers will begin modeling and do the think-aloud process for the summarizing strategy.
- Both teachers will have students practice predicting, making connections, visualizing, inferring, and questioning strategies.
- Both teachers will model the use of a graphic organizer for summarizing.

November 20-24, 2006
- Thanksgiving Break

November 27-December 1, 2006
- Both teachers will continue modeling and do the think-aloud process for summarizing strategy.
- Both teachers will have students practice predicting, making connections, visualizing, inferring, and questioning strategies.
- Both teachers will have the whole class practice using a graphic organizer for summarizing.

December 4-8, 2006
- Both teachers will have students practice predicting, making connections, visualizing, inferring, questioning, and summarizing strategies.
- Both teachers will have students use a graphic organizer for summarizing.

December 11-15, 2006
- Both teachers will have students practice predicting, making connections, visualizing, inferring, questioning, and summarizing strategies.
- Both teachers will use a teacher observation checklist of student's use of comprehension strategies.
- Both teachers will continue to use graphic organizers.

December 18-22, 2006- January 5, 2007
- Winter Break

January 8-12, 2007
- Both teachers will review by modeling and do the think aloud process for predicting, making connections, visualizing, inferring, questioning, and summarizing strategies.
- Both teachers will continue to use graphic organizers.

January 15-19, 2007
- Both teachers will have students practice predicting, making connections, visualizing, inferring, questioning, and summarizing strategies.
- Both teachers will continue to use graphic organizers.
- Both teachers will use a teacher observation checklist of student's use of comprehension strategies.

January 22-26, 2007
- Both teachers will model metacognitive journal reflections of comprehension strategies used during reading.
- Teacher A will administer the State Snapshots of Early Literacy Form B to second grade students.
- Teacher B will administer the Test Ready's Practice Reading Comprehension Test to third grade students.
- Both teachers will score their tests.
- Both teachers will copy the Metacomprehension Strategy Index (MSI).
- Both teachers will distribute the MSI to students during reading class.
- Both teachers will read one section per day for three consecutive days on the MSI.
- Students will complete the MSI while teachers read the survey.
- Both teachers will collect daily and score the MSI.

January 29-February 2, 2007
- Both teachers will model metacognitive journal reflections of comprehension strategies used during reading.
- Both teachers will have students practice predicting, making connections, visualizing, inferring, questioning, and summarizing strategies.
- Both teachers will continue to use graphic organizers.
- Both teachers will analyze comprehension test, MSI survey, and teacher observation checklist data.

February 5-9 2007
- Both teachers will model metacognitive journal reflections of comprehension strategies used during reading.
- Both teachers will have students practice predicting, making connections, visualizing, inferring, questioning, and summarizing strategies.
- Both teachers will continue to use graphic organizers.

February 12-16, 2007
- Both teachers will have students complete a metacognitive journal reflection of a comprehension strategy used during reading.
- Both teachers will have students practice predicting, making connections, visualizing, inferring, questioning, and summarizing strategies.
- Both teachers will continue to use graphic organizers.

February 19-23, 2007
- Both teachers will have students complete a metacognitive journal reflection of a comprehension strategy used during reading.
- Both teachers will have students practice predicting, making connections, visualizing, inferring, questioning, and summarizing strategies.
- Both teachers will continue to use graphic organizers.

Post-Documentation

February 26-March 2, 2007
- Both teachers will begin writing the Historical Description of the Intervention.

March 5-9, 2007
- Both teachers will begin writing the Historical Description of the Intervention.

March 12-16, 2007
- Both teachers will begin writing the Historical Description of the Intervention.

March 19-23, 2007
- Both teachers will begin writing the Presentation and Analysis of Results.

March 26-30, 2007
- Both teachers will begin writing the Conclusions and Recommendations.

April 2—6, 2007
- Both teachers will write a reflection.

April 9-13, 2007
- Both teachers will make revisions and complete the Action Research Project.

April 16, 2007
- Both teachers will submit final Action Research Project.

Methods of Assessment

Three different tools were used by the teacher researchers to assess the changes in their students' learning. One of the tools used by the researchers to gather data were the Metacomprehension Strategy Index (Appendix B). This tool was used to measure the students' awareness of their strategic reading process before the strategies were introduced. The Metacomprehension Strategy Index was administered again the week of January 26, 2007 to gather post-intervention data with students in the researchers' second and third grade classrooms. This tool was used to ascertain whether students increased their awareness of strategic reading processes.

The second tool used by Teacher A was the State Snapshots of Early Literacy Test administered to the students in the second grade classroom in the week of September 4, 2006 and again in the week of January 26, 2007. This tool was used to determine student growth in reading comprehension.

The tool used by Teacher B was the Test Ready's Practice Reading Comprehension Test administered to the students in the third grade classroom in the week of September 4, 2006 and again in the week of January 26, 2007. This tool was used to determine student growth in reading comprehension.

The Teacher Observation Checklist (Appendix C) was used by both researchers to gather data throughout the intervention. This tool provided information on changes in how well their students understood and used reading comprehension strategies over time.

Both researchers observed and recorded on the checklist whether or not their students were using the targeted reading comprehension strategies. The observations were completed by both researchers in their own classrooms on October 9, 2006, November 6, 2006, December 11, 2006, and January 15, 2007.

Chapter 4

PROJECT RESULTS

Historical Description of the Interventions

The objective of this research project was to improve reading comprehension in the targeted second grade classroom and third grade classroom through teacher modeling and the think-aloud process using six strategies. The teacher researchers used predicting, making connections, visualizing, inferring, questioning, and summarizing strategies. Beginning in September of 2006, the strategies were introduced and practiced over a sixteen-week period ending with an assessment at the end of January 2007. The strategies were first modeled by the teacher researchers through the think-aloud process and the use of graphic organizers. Next the strategies were practiced by the whole class, then small groups, and finally independently.

Presentation and Analysis of Results

One tool the teacher researchers used to collect data, analyze students' use, and students' understanding of the reading strategies was an observation checklist. Beginning in October 2006, once a month, the teacher researchers used a checklist to observe which reading comprehension strategies were being used by students in small groups. The teacher researchers found two problems with using the checklists. The teachers observed that students had a problem using the strategies within the group setting without a guide sheet to follow.

Therefore the teacher researchers developed a group record-keeping sheet for the various strategies students were to use before, during, and after reading the story in their group. This record-keeping sheet aided the teacher researchers in monitoring students' progress since observing all groups at one time was a second problem.

   The teacher researchers observed that students in the second and third grade classrooms were able to consistently use predicting, making connections, and visualizing strategies in a group and individually. The students in the second and third grade classrooms were observed by the teacher researchers to only use the inferring strategy when it was teacher-directed in a whole class oral discussion. Another observation with the inferring strategy took place in a small group setting through a teacher-made paper and pencil activity. The teacher researchers observed the strong students leading the small group discussion. The questioning and summarizing strategies were observed by both teacher researchers in a whole class teacher-directed setting or a small group setting with the stronger students leading the discussion.

   Following the teaching of the reading strategies, the teacher researchers administered the Metacomprehension Strategy Index (MSI) to see if the strategies changed student approaches to reading. The MSI measures students' knowledge of reading strategies used before, during, and after reading. The teacher researchers noted the new activities led to an increase in student knowledge of the reading strategies in all parts of the MSI.

Figure 7. A comparison of percentages of pre-test and post-test responses for the Metacomprehension Strategy Index for the targeted second and third grade students.

The before-reading strategies in the MSI Part I (Figure 7), showed a comparison of pre-test percentages from September, 2006 and post-test percentages from January 2007. These percentages indicated an increase in correct student responses of 38% for predicting, 13% for previewing, 11% for purpose setting, 20% for self-questioning, and 23% for drawing from background knowledge.
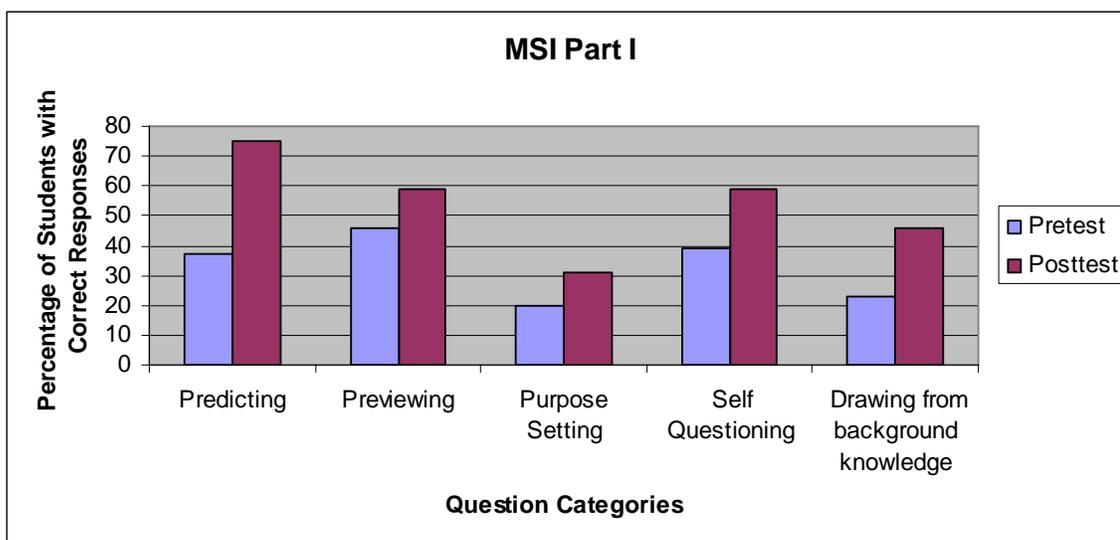
Figure 8. A comparison of percentages of pre-test and post-test responses for the Metacomprehension Strategy Index for the targeted second and third grade students.

The MSI Part II, which measures reading strategies used during reading, showed a comparison of pre-test responses from September 2006 and post-test responses from January 2007, (Figure 8). These scores indicated an increase in correct student responses of 35% for predicting, 49% for self-questioning, 20% for drawing from background knowledge, and 19% for summarizing.
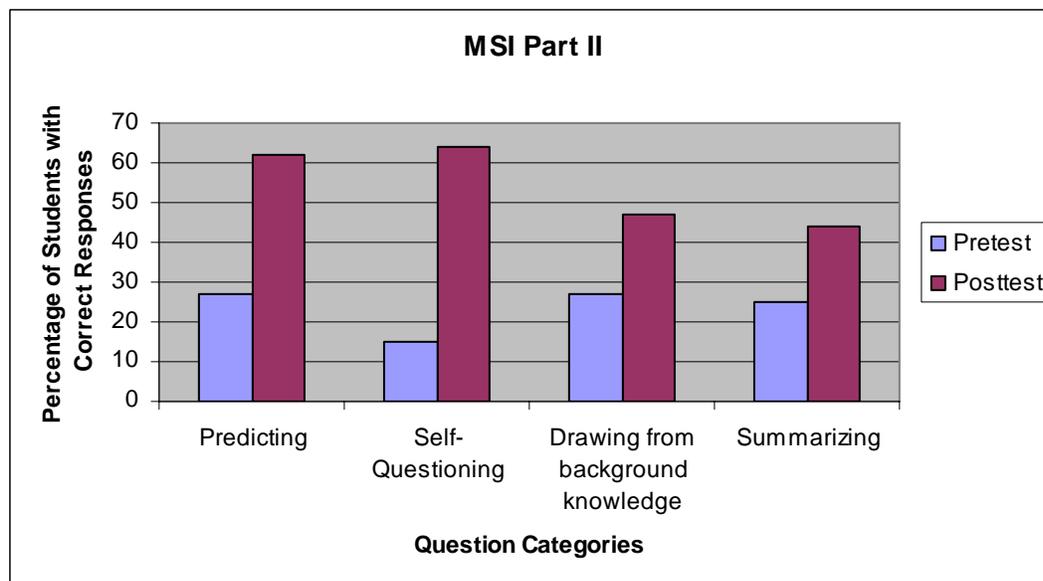
Figure 9. A comparison of percentages of pre-test and post-test responses for the Metacomprehension Strategy Index for the targeted second and third grade students.

The MSI Part III ,which measures reading strategies used after reading, showed a comparison of pre-test responses from September 2006 and post-test responses from January 2007 (Figure 9). These scores indicated an increase in correct student responses of 35% for predicting, 36% for purpose setting, 23% for drawing from background knowledge, and 23% for summarizing.
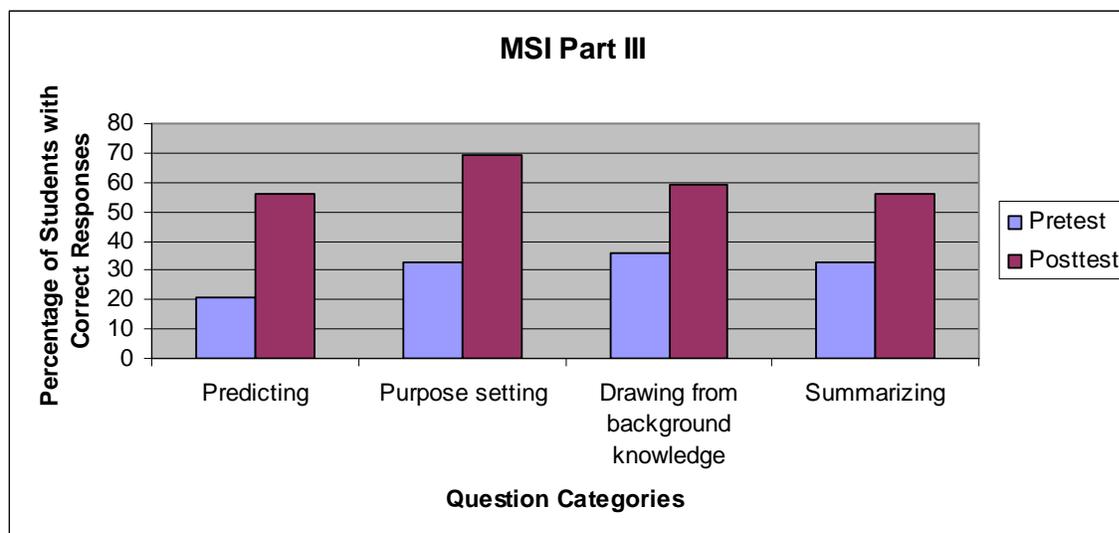
State Snapshots of Early Literacy: Grade 2
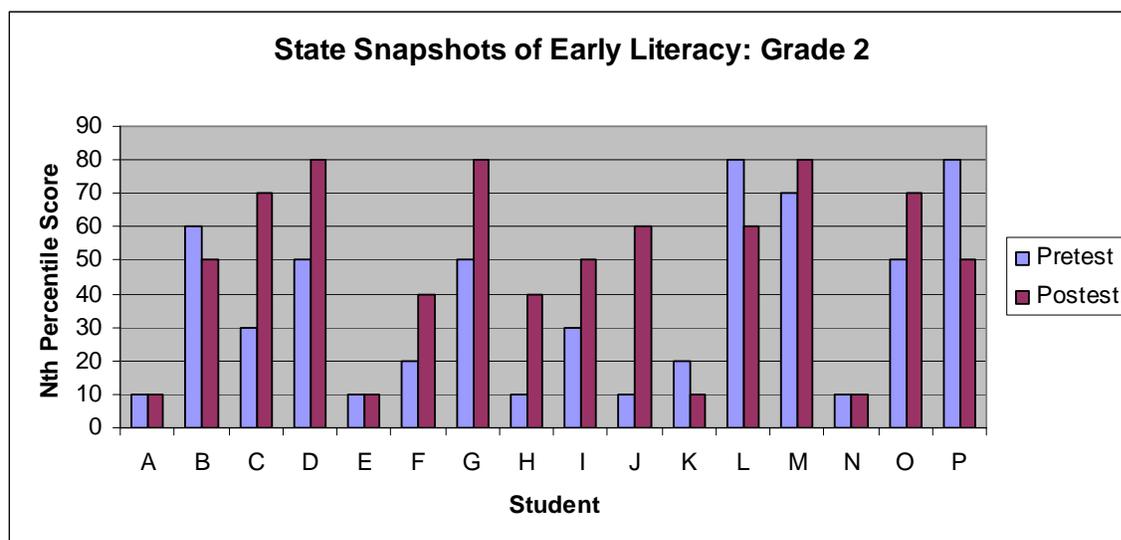
Figure 10. Pre-test and post-test scores for the State Snapshots of Early Literacy for the targeted second grade students.

The third assessment tool used in the second grade classroom to gather post intervention information was the State Snapshots of Early Literacy (SSEL) Test B Comprehension for that grade level. This test is usually administered in April or May to second grade students, but was given at the end of January for this research project. The results of the SSEL (Figure 10), indicated nine students improved their scores, three students maintained the same score, and four students' scores were lower. Ten of the 16 students tested were at the 50th percentile or higher, which is considered on target for the grade level with this test. In comparison, only 7 of the 16 students were at the 50th percentile or higher during pre-testing in September.
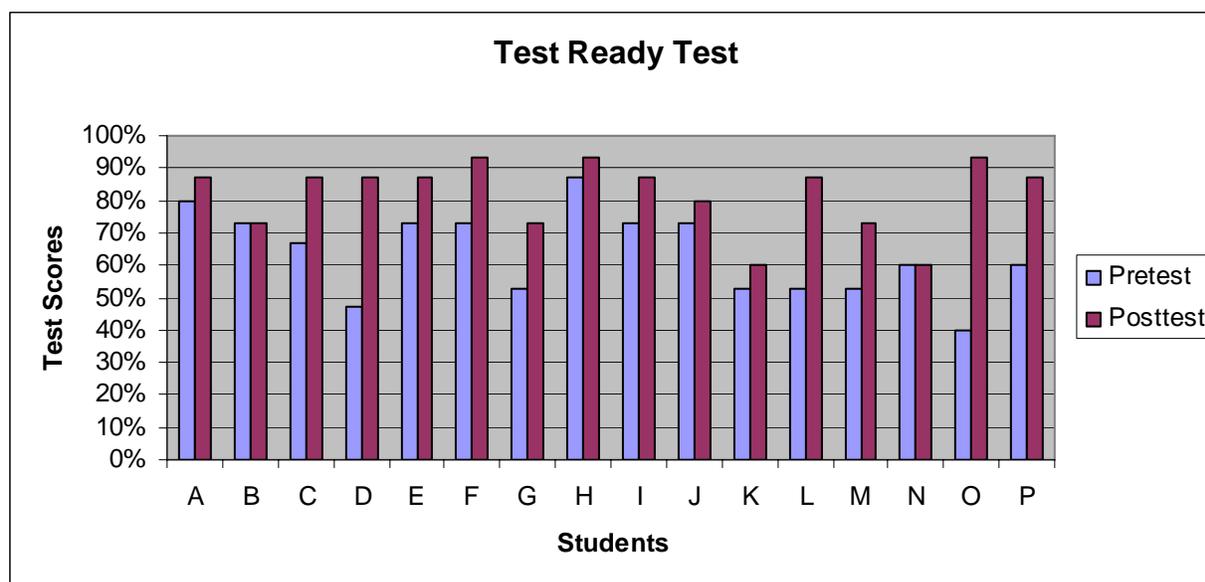
Test Ready Test

Figure 11. Pre-test and post-test scores for the Test Ready Test for the targeted third grade students.

The third grade class was given the Test Ready Test to gather post intervention information on their reading comprehension. As seen in Figure11, 2 of the 16 students maintained the same scores from the pre-test to the post-test assessment. Fourteen of the 16 students showed an increase in their post-test assessment score. Eleven of the 16 students scored 80% or better on their post-test assessment.

Conclusion and Recommendations

The use of teacher modeling, the teacher think-aloud process, and student practice of the reading comprehension strategies which included predicting, making connections, visualizing, inferring, questioning, and summarizing had a positive impact on student comprehension. The results of the MSI showed an increase in student knowledge of reading strategies. In the MSI Part I, which measured strategies used before reading, the results indicated a 21% increase in correct student responses. In the MSI Part II, which measured strategies used during reading, the

results indicated a 30% increase in correct student responses. In the MSI Part III, which measured strategies used after reading, the results indicated a 29% increase in correct student responses. The teacher researchers conclude that as a result of the increase in students' knowledge of the reading strategies, they raised their reading comprehension scores in the SSEL and the Test Ready Test.

The teacher researchers recommend a continuation of teacher modeling, the use of the teacher think-aloud process, and student practice of the reading comprehension strategies. It is also the intention of the teacher researchers to share their research results and their knowledge of the comprehension strategies with the administration and other teachers in their school.

Reflection

This research project has helped me (Teacher A) to develop a better understanding of the strategies my second grade students need to learn in order for them to comprehend when they read. I have found the teacher modeling and the think-aloud process are the most valuable tools I can use to help my students understand the comprehension strategies I want them to use. In the past I have used both of these tools, but failed to see that they need to be used to model the same strategies throughout the school year. The time when I read to the children in my class and model these strategies has become more productive and a better learning experience for my students. At the same time it has given me a better insight into my students' lives through their personal connections. One of the struggles that I encountered with my second grade students was a way to know if they were using the comprehension strategies independently. Even during small group work the only way they were able to show the use of the strategies was through some type of paper and pencil activity or a checklist. Since many of these comprehension strategies are new to

the children, I think it was unrealistic for me (Teacher A) to expect them to use the strategies without some type of written reminder. I feel the majority of my students are now able to use the predicting, making connections, and visualizing strategies in small groups and independently. Most of my students still need guided practice for the questioning, inferring, and summarizing strategies. At this stage of their cognitive development I think it is appropriate for most of the students to need guided practice for the questioning, inferring, and summarizing strategies.

If there is one thing I could change about this research project, I would have given my students the same pre and post comprehension test instead of Test A in the fall and Test B in January. Test B is usually given in late April or early May for this grade level and I feel my students would have performed better if they had the additional time to practice and improve their reading fluency and comprehension before taking Test B.

By working with Teacher B on this project I was able to see the next grade level's ability to understand and use the same reading strategies. As Teacher B and I shared our observations and experiences about the interventions in our classrooms, it was apparent to me the third grade students had the cognitive ability to understand and use the comprehension strategies on a more independent level.

As a result of this research project I will use teacher modeling and the teacher think-aloud process in my curriculum. These tools will be used repeatedly throughout the school year to reinforce the strategies I want my students to learn how to use. I am more aware of my students' abilities to use these comprehension strategies and recognize that some of my students will be able to use these strategies independently and some will continue to need guided practice with these strategies through the end of second grade.

I, Teacher B, found this journey through research quite rewarding. When I first began my research I was quite overwhelmed with the number of reading comprehension strategies I needed to implement and unsure of how everything would come together. Now I feel more confident and knowledgeable about the various reading comprehension strategies, how to integrate them into my curriculum, and how it will improve the higher-order thinking skills of my students.

I found that by using teacher modeling and the teacher think-aloud process; my students had a better understanding of the various reading strategies. As I taught the reading comprehension strategies my students were eager to use predicting, making connections, and visualizing strategies whenever I did a read aloud or we started a new unit in science or social studies. One problem I encountered was when students worked in small groups; they were unable to use the strategies unless the teacher prompted them. Another difficulty my students had was inferring, summarizing and questioning in small groups without teacher prompting. I found the strong students leading the group in the use of these strategies. These strategies still need teacher modeling and guided practice for a majority of my students. Due to limited time, I felt a little rushed with some of the strategies I introduced. I think some strategies needed more time in order for my students to have a solid foundation. Overall, my students did improve their reading

comprehension, but next year I will not do my post-test until late April or early May. I think by testing later I will see greater improvement.

Now that I have seen an increased understanding of reading comprehension strategies and an improvement in reading comprehension of my students, I would like to continue using these strategies in my curriculum. Our literature review for this research project made me aware of other areas of reading instruction that I would like to incorporate best practices into my curriculum for a well rounded reading program.

REFERENCES

Adler, C. R. (Ed.). (2001, September). *Put reading first: The research building blocks for teaching children to read.* Jessup, MD: ED Pubs, 47-56.

Adock, D. (2002). *Test ready reading longer passages.* North Billerica, MA: Curriculum Associates, Inc.

Barr, R., Sullivan, D., Blachowicz, C., & Buhle, R. (2004). *The Illinois snapshot of early Literacy.* Retrieved May 16, 2006 from, http://www.isbe.net/ils/ela/reading/html/isel.htm

Block, C., Gambrell, L., & Pressley, M. (Eds.). (2002). *Improving comprehension instruction rethinking research, theory, and classroom practice.* San Francisco, Jossey-Bass.

Block, C., & Israel, S. (2005). *Reading first and beyond: The complete guide for teachers and literacy coaches.* Thousand Oaks, CA: Corwin Press.

Duke, N. K., & Pearson, P. D. (n.d.). *Effective practices for developing reading comprehension.* Retrieved December 28, 2005 from, http://www.ctap4.org/infolit/trainers/comprehe_strategies.pdf

Harvey, S., & Goudvis, A. (2000). *Strategies that work teaching comprehension to enhance understanding.* York, ME: Stenhouse Publishers.

State Board of Education. (2005). *State district report card.* Retrieved December 14, 2005 from, http://webprod.isbe.net/ereportcard/publicsite/getReport.aspx?year=2005&code

Interactive State Report Card. (2005). *Interactive state school report card.* Retrieved December 14, 2005 from, http://iirc.niu.edu/School.aspx?schoolID=480720680022002&year=2005

National Center for Education Statistics. (2005). *The nation's report card state reading 2005.* Retrieved June 26, 2006 from, http://nces.ed.gov/nationsreportcard/pdf/stt2005/2006425IL4.pdf

National Center for Education Statistics. (1995). *Listening to children read aloud: Oral fluency, (1)* 1, 1-5. Retrieved June 26, 2006 from:

National Reading Panel. (n.d.). *Comprehension III teacher preparation and comprehension strategies instruction.* (Chap. 4). Retrieved December 14, 2005 from, http://www.nichd.nih.gov/publications/nrplch4-111.pdf

Oczkus, L. D. (2003). *Reciprocal teaching at work strategies for improving reading comprehension.* Newark, DE: International Reading Association.

Schmitt, M. C. (1990). A questionnaire to measure children's awareness of strategic reading processes. *The Reading Teacher,* 43 (7), 454-461.

School Improvement Plan. (2001).[Site A Handout]

Serafini, F. (2004), *Lessons in comprehension explicit instruction in the reading workshop.* Portsmouth, NH: Heinemann.

Teele, S. (2004). *Overcoming barricades to reading a multiple intelligences approach.* Thousand Oaks, CA: Corwin Press.

APPENDICES

Appendix A

SAINT·XAVIER·UNIVERSITY

School of Education
Consent to Participate in a Research Study
Improving Reading Comprehension Through Higher-Order Thinking Skills

Dear Parent or Guardian,

I am currently enrolled in a master's degree program at Saint Xavier University. This program requires me to design and implement a project on an issue that directly affects my instruction. I have chosen to examine reading comprehension.

The purpose of this project is to teach reading comprehension. It may help your child use various comprehension strategies to become a better reader.

I will be conducting my project from August 28, 2006 through March 2, 2007. The activities related to the project will take place during regular instructional delivery. All children will be using reading comprehension strategies such as, predicting, making connections, inferring, questioning, and summarizing. The gathering of information for my project during these activities offers no risks of any kind to your child.

Your permission allows me to include your student in the reporting of information for my project. All information gathered will be kept completely confidential, and information included in the project report will be grouped so that no individual can be identified. The report will be used to share what I have learned as a result of this project with other professionals in the field of education.

Participation in this study is completely voluntary. You may choose to withdraw from the study at any time. If you choose not to participate, information gathered about your student will not be included in the report.

If you have any questions or would like further information about my project, please contact me at Oak Grove (309-697-3367).

If you agree to have your student participate in the project, please sign the attached statement and return it to me. I will be happy to provide you with a copy of the statement if you wish.

Sincerely,

Cynthia Barnett

PLEASE RETURN THE ATTACHED STATEMENT TO ME BY Friday, September 1, 2006.

Consent to Participate in a Research Study
Improving Reading Comprehension Through Higher-Order Thinking Skills

I, _____, the parent/legal guardian of the minor named below, acknowledge that the researcher has explained to me the purpose of this research, identified any risks involved, and offered to answer any questions I may have about the nature of my child's participation. I freely and voluntarily consent to my child's participation in this project. I understand all information gathered during this project will be completely confidential. I also understand that I may keep a copy of this consent form for my own information.

NAME OF MINOR:_____

_____

Signature of Parent/Legal Guardian   Date

Appendix A

SAINT·XAVIER·UNIVERSITY

School of Education

Consent to Participate in a Research Study
Improving Reading Comprehension Through Higher-Order Thinking Skills

Dear Parent or Guardian,

I am currently enrolled in a master's degree program at Saint Xavier University. This program requires me to design and implement a project on an issue that directly affects my instruction. I have chosen to examine reading comprehension.

The purpose of this project is to increase students reading comprehension. It may help your child use various comprehension strategies to become a better reader.

I will be conducting my project from August 28, 2006 through March 2, 2007. The activities related to the project will take place during regular instructional delivery. All children will be using reading comprehension strategies such as, predicting, making connections, inferring, questioning and summarizing. The gathering of information for my project during these activities offers no risks of any kind to your child.

Your permission allows me to include your child's data in the reporting of information for my project, through a pre/post questionnaire and a pre/post reading test. I will also be using a teacher observation checklist. All information gathered will be kept completely confidential, and information included in the project report will be grouped so that no individual can be identified. The report will be used to share what I have learned as a result of this project with other professionals in the field of education.

Participation in this study is completely voluntary. You may choose to withdraw from the study at any time. If you choose not to participate, information gathered about your student will not be included in the report.

If you have any questions or would like further information about my project, please contact me at Oak Grove (309-697-3367).

If you agree to have your student participate in the project, please sign the attached statement and return it to me. I will be happy to provide you with a copy of the statement if you wish.

Sincerely,

Brigitte McKown

PLEASE RETURN THE ATTACHED STATEMENT TO ME BY Friday, September 1, 2006.

Consent to Participate in a Research Study
Improving Reading Comprehension Through Higher-Order Thinking Skills

I, _____, the parent/legal guardian of the minor named below, acknowledge that the researcher has explained to me the purpose of this research, identified any risks involved, and offered to answer any questions I may have about the nature of my child's participation. I freely and voluntarily consent to my child's participation in this project. I understand all information gathered during this project will be completely confidential. I also understand that I may keep a copy of this consent form for my own information.

NAME OF MINOR:_____

_____

Signature of Parent/Legal Guardian   Date

Appendix B

Student Name_____

Metacomprehension Strategy Index
Part I

Directions: Listen carefully as I read each statement and the 4 choices. Circle the one choice which tells a good thing to do to help your self understand a story better **before** you read it.

1. Before I begin reading, it's a good idea to:
    A. See how many pages are in the story.
    B. Look up all the big words in the dictionary.
    C. Make some guesses about what I think will happen in the story.
    D. Think about what has happened so far in the story.

2.   Before I begin reading, it's a good idea to:
    A. Look at the pictures to see what the story is about.
    B. Decide how long it will take me to read the story.
    C. Sound out the words I don't know.
    D. Check to see if the story is making sense.

3. Before I begin reading, it's a good idea to:
    A. Ask someone to read the story to me.
    B. Read the title to see what the story is about.
    C. Check to see if most of the words have long or short vowels in them.
    D. Check to see if the pictures are in order and make sense.

4. Before I begin reading, it's a good idea to:
    A. Check to see that no pages are missing.
    B. Make a list of the words I'm not sure about.
    C. Use the title and pictures to help me make guesses about what will happen in the story.
    D. Read the last sentence so I will know how the story ends.

5. Before I begin reading, it's a good idea to:
   A. Decide on why I am going to read the story.
   B. Use the difficult words to help me make guesses about what will happen in the story.
   C. Reread some parts to see if I can figure out what is happening if things aren't making sense.
   D. Ask for help with the difficult words.

6. Before I begin reading, it's a good idea to:
   A. Retell the main points that have happened so far.
   B. Ask myself questions that I would like to have answered in the story.
   C. Think about the meanings of the words which have more than one meaning.
   D. Look through the story to find all the words with 3 or more syllables.

7. Before I begin reading, it's a good idea to:
   A. Check to see if I have read the story before.
   B. Use my questions and guesses as a reason for reading the story.
   C. Make sure I can pronounce all the words before I start.
   D. Think of a better title for the story.

8. Before I begin reading, it's a good idea to:
   A. Think of what I already know about the things I see in the pictures.
   B. See how many pages are in the story.
   C. Choose the best part of the story to read again.
   D. Read the story aloud to someone.

9. Before I begin reading, it's a good idea to:
   A. Practice reading the story aloud.
   B. Retell all of the main points to make sure I can remember the story.
   C. Think about where the story might be taking place.
   D. Decide if I have enough time to read the story.

Before I begin reading, it's a good idea to:
   E. Check to see if I am understanding the story so far.
   F. Check to see if the words have more than one meaning.
   G. Think about where the story might be taking place.
   H. List all of the important details.

Appendix B

Student Name_____

Metacomprehension Strategy Index
Part II

Directions: Listen carefully as I read each statement and the 4 choices.
Circle the one choice which tells a good thing to do to help yourself understand a
story better **while** you are reading it.

11. While I'm reading, it's a good idea to:
    A. Read the story very slowly so that I will not miss any important part.
    B. Read the title to see what the story is about.
    C. Check to see if the pictures have anything missing.
    D. Check to see if the story is making sense by seeing if I can tell what's
       happened so far.

12. While I'm reading, it's a good idea to:
    A. Stop to retell the main points to see if I am understanding what has
       happened so far.
    B. Read the title to see what the story is about.
    C. Read only the beginning and the end of the story to find out what it is
       all about.
    D. Skip the parts that are too difficult for me.

13. While I'm reading, it's a good idea to:
    A. Look all of the big words up in the dictionary.
    B. Put the book away and find another one if things aren't making
       sense.
    C. Keep thinking about the title and the pictures to help me decide what
       is going to happen next.
    D. Keep track of how many pages I have left to read.

14. While I'm reading, it's a good idea to:
   A. Keep track of how long it is taking me to read the story.
   B. Check to see if I can answer any of the questions I asked before I started reading.
   C. Read the title to see what the story is going to be about.
   D. Add the missing detail to the pictures.

15. While I'm reading, it's a good idea to:
   A. Have someone read the story aloud to me.
   B. Keep track of how many pages I have read.
   C. List the story's main character.
   D. Check to see if my guesses are right or wrong.

16. While I'm reading, it's a good idea to:
   A. Check to see that the characters are real.
   B. Make a lot of guesses about what is going to happen next.
   C. Not look at the pictures because they might confuse me.
   D. Read the story aloud to someone.

17. While I'm reading, it's a good idea to:
   A. Try to answer the questions I asked myself.
   B. Try not to confuse what I already know with what I'm reading about.
   C. Read the story silently.
   D. Check to see if I am saying the new vocabulary words correctly.

18. While I'm reading, it's a good idea to:
   A. Try to see if my guesses are going to be right or wrong.
   B. Reread to be sure I haven't missed any of the words.
   C. Decide on why I am reading the story.
   D. List what happened first, second, third, and so on.

19. While I'm reading, it's a good idea to:
   A. See if I can recognize the new vocabulary words.
   B. Be careful not to skip any parts of the story.
   C. Check to see how many of the words I already knew.
   D. Keep thinking of what I already know about the things and ideas in the story to help me decide what is going to happen.

20. While I'm reading, it's a good idea to:
    A. Reread some parts or read ahead to see if I can figure out what is happening if things aren't making sense.
    B. Take my time reading so that I can be sure I understand what is happening.
    C. Change the ending so that it makes sense.
    D. Check to see if there are enough pictures to help make the story ideas clear.

Appendix B

Student Name_____

Metacomprehension Strategy Index
Part III

Directions: Listen carefully as I read each statement and the 4 choices. Circle the one choice which tells a good thing to do to help yourself understand a story better **after** you have read it.

21. After I've read a story it's a good idea to:
     A. Count how many pages I read with no mistakes.
     B. Check to see if there were enough pictures to go with the story to make it interesting.
     C. Check to see if I met my purpose for reading the story.
     D. Underline the causes and effects.

22. After I've read a story it's a good idea to:
     A. Underline the main idea.
     B. Retell the main points of the whole story so that I can check to see if I understood it.
     C. Read the story again to be sure I said all of the words right.
     D. Practice reading the story aloud.

23. After I've read a story it's a good idea to:
     A. Read the title and look over the story to see what it is about.
     B. Check to see if I skipped any of the vocabulary words.
     C. Think about what made me make good or bad predictions.
     D. Make a guess about what will happen next in the story.

24. After I've read a story it's a good idea to:
     A. Look up all of the big words in the dictionary.
     B. Read the best parts aloud.
     C. Have someone read the story aloud to me.
     D. Think about how the story was like things I already knew about before I started reading.

25. After I've read a story it's a good idea to:
  A. Think about how I would have acted if I were the main character in the story.
  B. Practice reading the story silently for practice of good reading.
  C. Look over the story title and pictures to see what will happen.
  D. Make a list of the things I understood the most.

Adapted from:

Schmitt, M.C. (1990). *A questionnaire to measure children's awareness of strategic reading processes.* The Reading Teacher, 43,454-461.

Appendix C

Monthly Teacher Observation Checklist for
Reading Comprehension Strategies
Date

Student Number	Predicting	Making Connections	Inferring	Questioning	Visualizing	Summarizing

Teacher will use this checklist to observe students ability to use these comprehension strategies.

+ Student is able to use this strategy.

- Student is having difficulty using this strategy.