COMPREHENSION STRATEGY INSTRUCTION

WITH TEACHER READ ALOUDS

FOR FIRST GRADERS

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COMPREHENSION STRATEGY INSTRUCTION

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Sharon M. Elder

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COMPREHENSION STRATEGY INSTRUCTION

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Sharon Mattocks Elder, daughter of Louie C. Mattocks, Jr. and Ruth B. Mattocks, was born March 30, 1957, in Columbus, Georgia. She graduated from Central High School in Phenix City, Alabama, in 1975. She received a Bachelor of Science degree in Early Childhood Education from Auburn University in 1990. She received a Master of Science degree in Administration/Educational Leadership from Troy State University in 1999. She was a classroom teacher at Central Elementary School and Lakewood Elementary School in Phenix City, Alabama for 15 years. Since 2005 she has served Lakewood Elementary School as a reading coach. She was married to Phillip Raymond Elder on June 19, 1976. They have a son, Phillip Raymond Elder, Jr., a daughter, Jennifer Lauren Elder Ramos, and one grandson, Luke Michael Ramos.

DISSERTATION ABSTRACT

COMPREHENSION STRATEGY INSTRUCTION

WITH TEACHER READ ALOUDS

FOR FIRST GRADERS

Sharon Mattocks Elder

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The purpose of this experimental study was to examine the effectiveness of comprehension strategies instruction delivered through teacher read alouds on the reading comprehension abilities of first grade students. Specifically, the researcher compared the effectiveness of intentional comprehension strategies instruction embedded in teacher read alouds to the effectiveness of student-directed literature discussions of teacher read alouds on the comprehension abilities of first grade students.

Participants in this study consisted of 34 first grade students who had achieved benchmark status on mid-year Dynamic Indicators of Basic Early Literacy Skills Oral

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Reading Fluency (DORF) and Nonsense Word Fluency (NWF) subtests. Treatment group students received comprehension strategies instruction embedded in read-aloud sessions, applied comprehension strategies during a 15-minute independent reading time, and verbally shared examples of successful strategy use with other group members. Control group students freely discussed the literature during each read-aloud session, participated in a 15-minute independent reading time, and shared book recommendations with other group members.

Participants completed the Degrees of Reading Power (Form J0) as a pretest comprehension assessment and the Degrees of Reading Power (Form K0) as a posttest comprehension assessment. Analyses of data indicated that both treatment group participants and control group participants improved significantly in reading comprehension ability; however, an independent samples t test indicated that treatment group participants demonstrated significantly higher comprehension gains than did control group participants.

The results of this study indicate that comprehension strategies instruction delivered through teacher read alouds in a whole group setting can significantly improve reading comprehension for first grade students.

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I. INTRODUCTION

Introduction

The scientifically based reading research includes a large body of studies that support explicit comprehension strategies instruction as a means for improving intermediate and secondary students' reading comprehension. Very few studies, however, have examined comprehension strategies instruction with primary grades students. I began to examine the effectiveness of comprehension strategies instruction with students in my own first grade classroom while completing a doctoral program in reading education. I became a reading coach in 2005, which allowed me to devote all of my energy to my passion: the pursuit of excellent reading instruction. As the reading coach, I was able to deliver comprehension instruction embedded in the daily read aloud with first grade students and to informally examine the effectiveness of that instruction. These experiences teaching comprehension led me to the research literature and questions addressed in this dissertation. This study was undertaken to experimentally determine the effects of comprehension strategies instruction on reading comprehension for first grade students.

Comprehension is the essence of reading. However, it was not until after Delores Durkin (1978/79) reported finding little comprehension instruction in upper elementary classrooms that researchers began to investigate comprehension instruction more vigorously. Durkin observed most teachers assessing comprehension by asking the

students questions about the texts that were read. However, she found little evidence of any comprehension instruction going on in those same classrooms.

Two decades later, Pressley, Wharton-McDonald, Hampston, and Echevarria (1998) published a report of their observations of literacy instruction in grades four and five in ten classrooms in upstate New York. The teachers chosen for the study had been identified by the school district as having exemplary classrooms and consistently high student reading achievement. The researchers also conducted two comprehensive interviews with the same teachers to clarify the researchers' observations and to allow the teachers to explain their instructional goals. While most of the observations were encouraging, Pressley (2002) later lamented, "In general, students were provided with opportunities to practice comprehension strategies, but they were not actually taught the strategies themselves nor the utility value of applying them (p. 241)."

Comprehension instruction does not just happen even in the classrooms of exemplary reading teachers. In order for comprehension instruction to be effectively delivered in the classroom, teachers need to know what strategies to target, how to teach those strategies, and appropriate ages for instruction. Fortunately, researchers have begun to seek answers for many of these questions related to the what, how, and when for comprehension instruction.

In one of these research initiatives, Pressley and Afflerbach (1995) reviewed all of the published verbal protocol studies through 1994 that sought to identify comprehension processes used by proficient readers. These studies included diverse participants, ranging in age from fourth grade students to professional adults. From this exhaustive review, the researchers were able to analyze the findings and develop a model of conscious

comprehension processes involved in skillful reading. These processes, or strategies, are deliberate decisions made by the reader in order to aid reading comprehension and may occur before, during, and after reading.

Prior to reading a text, proficient readers set a purpose for reading the selected text (Pressley & Afflerbach, 1995). A good reader not only sets a purpose but also keeps that purpose in mind throughout the reading of the text. Good readers preview a text by skimming through the pages. While looking through the book, good readers notice text structure, begin to make predictions about text content, and decide whether or not the text will satisfy their purpose in reading. The reader who decides that the text does not address the original purposes may discard the text without reading further.

After the initial overview, the proficient reader proceeds with the text, aware of his established purpose for reading. The reader varies his reading rate as he closely self monitors his comprehension of the text. Thus a good reader may slow down when encountering text that is difficult to understand or text that is related to his reading purpose and may speed up when reading easier sections of the text or when reading parts of the text deemed irrelevant to his purpose in reading (Pressley, 2002).

Good readers often make predictions about text content based on their preview of the text prior to reading the text. As they read further and gather new information from the text, they continuously accept, modify, or reject earlier predictions regarding text content (Pressley, 2002; Pressley & Afflerbach, 1995).

While reading, proficient readers make carefully considered inferences as well as automatic, unconscious inferences as they seek to determine meanings of unknown words, make judgments concerning the characters' intentions or the author's motivation,

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and connect text content to their own prior knowledge (Pressley, 2002; Pressley & Afflerbach, 1995).

The proficient reader also uses prior knowledge as a filter, through which personal interpretations regarding the text are formed. The skilled reader connects parts of text in an attempt to form cohesive thoughts about the text as a whole, summarize text as it is read, and create visualizations of descriptive parts of the text (Pressley, 2002; Pressley & Afflerbach, 1995).

After reading, the proficient reader may continue to reflect on what he has read, which may lead to re-reading portions of the text or summarizing the contents of the text as the meaning is pondered (Pressley, 2002, Pressley & Afflerbach, 1995).

This analysis of skilled reading conducted by Pressley and Afflerbach (1995) informed educators and provided a framework for determining what strategies explicit comprehension instruction should include. Their study suggested that teachers of comprehension must actually teach and show students the value of using strategies such as:

- Setting a purpose for reading

- Previewing the text to be read

- Making and modifying predictions

- Self monitoring of ongoing comprehension

- Inferring

- Using prior knowledge

- Summarizing

- Visualizing

- Interpreting

Researchers, now aware of helpful comprehension strategies used by proficient readers, began to seek effective ways to teach young readers how to comprehend text.

One of the first attempts to teach students to use comprehension strategies was developed as a reciprocal teaching activity (Palincsar & Brown, 1984). This method, most often applied to expository text, has been used successfully with struggling readers. The comprehension strategies used in reciprocal teaching are clarification, summarization, question generation, and prediction. All strategies are first modeled by the instructor, after which the students share the teaching responsibility by assuming leadership in orchestrating their own and other students' use of the four aforementioned strategies. The text is chunked into sections by the teacher prior to reading so that students can silently read a portion of text and then participate in the group's comprehension work. Multiple studies have found that reciprocal teaching results in significantly improved comprehension ability in fourth grade and older students (Rosenshine, et al., 1994).

Reciprocal teaching relies greatly on excellent teacher modeling and scaffolding of students' attempts to use comprehension strategies and is grounded in Vygotsky's (1978) theory of cognitive development. Vygotsky's observation of teaching and learning in naturalistic situations led him to posit that there is a zone of proximal development whereby children can successfully complete a task with only scaffolding provided by another. According to Vygotsky, the interactions between adults and children during the child's attempts at performing tasks within this zone are critical to cognitive development. Vygotsky stated that children begin to internalize skills and

strategies that are first externally modeled by able adults. Over time, the child gradually assumes responsibility for the task under the watchful eye of the teacher and becomes competent at performing the skills or strategies independently.

Vygotsky's concepts of the *zone of proximal development* and *gradual release of responsibility* later became foundational in comprehension strategy instruction methods such as direct explanation of comprehension strategies model (Roehler & Duffy, 1984). Roehler and Duffy stressed the importance of a concept they referred to as *mental modeling*. In mental modeling, the teacher explicitly names and defines the featured comprehension strategy and, through thinking aloud, models the application of the strategy to text (Roehler & Duffy, 1984). For example, in using this approach, a teacher tells students that good readers often make connections between the text and their own personal experiences and that these connections help the reader to understand the events of the text, make more accurate predictions about the text, and better remember the text. The teacher then reads aloud from a text, stopping at several points to model her own use of comprehension strategies by thinking aloud. Students are then encouraged to apply the strategy while the teacher monitors and offers additional scaffolding as needed.

Another theorist who had a great impact on comprehension strategy instruction is Louise Rosenblatt. In her transactional or reader response theory of reading, Rosenblatt (1938) proposed that the meaning of a text will probably vary among different readers. This is due in part to the different schemata, networks of prior knowledge that each reader brings to the reading experience.

In *The Reader, the Text, the Poem*, Rosenblatt (1978) described two types of reading: efferent and aesthetic. In efferent reading the reader is primarily concerned

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with concepts to be retained after reading. Aesthetic reading is more concerned with what the reader experiences during reading. Rosenblatt stated, "In aesthetic reading, the reader's attention is centered directly on what he is living through during his relationship with that particular text" (1978, p. 25). Thus in efferent reading, the reader carries information away from the text after the reading event. In aesthetic reading, the reader is carried away by the text during the reading event. Rosenblatt further clarified that the primary stance is chosen by the reader and is determined by the reader's attention focus during the reading process.

Rosenblatt (1978) described the aesthetic reader as actively evoking his own successful comprehension of the text through relating the text to their own experiences and reacting to the feelings and visual images conjured up by the text. Rosenblatt also addressed the social aspect of reading, "Learning what others have made of a text can greatly increase insight into one's own relationship with it" (p. 146). Rosenblatt believed that as the reader discussed the meaning of the text with other readers, he very often would be led back to the text to consider the opinion of others or to defend his own ideas. Thus, the social give-and-take experienced in group literature discussions often results in increased insight and even leads to a consensus among the members of the group.

Pressley et al. (1992) took Roehler and Duffy's (1984) direct explanation model to another level by adding a transactional component to instruction of comprehension strategies. Transactional strategy instruction was influenced by Rosenblatt's reader response theory (1978) in three ways that were described by Pressley (2002):

- Meaning is determined by individuals using reading strategies as they transact with the text.

- The group members' actions and shared thoughts greatly impact how each individual member transacts with the text.

- All members of the group contribute to the obtained meaning of the text as students and the teacher apply comprehension strategies and comprehend the text together.

Thus, transactional strategy instruction includes direct explanation of comprehension strategies while scaffolding students' use of those strategies within a social context among other readers.

Statement of the Research Problem

Much of the comprehension strategies instruction research that has been completed to date has studied readers above second grade. In the younger grades, research attention has focused on decoding skills that these students must master (Adams, 1990) in order to address an attention bottleneck that affects comprehension. The bottleneck refers to the competition between decoding efforts and comprehension efforts as readers use the small amount of working short-term memory space to process text. LaBerge and Samuels (1974) argued that decoding must be automatic in order for comprehension to occur. While it is certainly true that students who are unable to decode at all will be unable to comprehend text, automaticity in decoding does not necessarily result in comprehension of text (NICHHD, 2000).

For students in kindergarten through second grade, there is a paucity of information related to improving comprehension for readers by teaching them to use comprehension strategies employed by proficient readers. One of the few studies of comprehension instruction with young children was a case study that examined the

practices of a first grade teacher using expository text during interactive read alouds. Smolkin and Donovan (2001), the authors of this study, proposed a sequence for the acquisition of comprehension strategies that begins in preschool and continues through the end of first grade and possibly the beginning of second grade. This period of comprehension acquisition, according to Smolkin and Donovan (2001; 2003) immediately precedes comprehension instruction in order to serve as a foundation for later instruction. Smolkin and Donovan (2002) stated:

> …we have argued for increasing our research attention to young children's development of text comprehension. We suggest strongly that cognitive development occurring between the ages of 5 to 7 needs to be considered as part of this equation. To us, this seems particularly important in determining the types of situations that will ultimately lead children to transfer, through low roads and revealed information, the comprehension activities demonstrated by adult models to their own future text encounters (p. 154).

The aim of this study was to increase knowledge in the field of reading comprehension as it relates to beginning readers. This study extends the knowledge revealed in the case study conducted by Smolkin and Donovan by using an experimental design to evaluate the effectiveness of comprehension strategy instruction on first grade students' comprehension abilities. It is the lack of information related to the impact of comprehension strategy instruction on first grade students' comprehension that provides the focal point and rationale for research questions addressed in this study.

Purpose of the Study

The purpose of this study was to determine if intentional comprehension strategy instruction delivered through teacher read alouds produced greater comprehension for first graders than teacher read alouds that featured student-directed literature discussions instead of comprehension strategy instruction. Specifically, the study addressed the following research questions:

Research Questions

1. To what extent are there statistically significant differences in pre- and posttest scores on the Degrees of Reading Power (DRP) of first grade students who received comprehension strategy instruction embedded in teacher read alouds?

2. To what extent are there statistically significant differences in pre- and posttest scores on the DRP of first grade students who participated in student-directed literature discussions of teacher read alouds?

3. To what extent are there statistically significant differences in pre- and posttest scores on the DRP scores of first grade students who have received comprehension strategy instruction embedded in teacher read alouds and DRP pre- and posttest scores of first grade students who have participated in student-directed literature discussions of teacher read alouds?

Statement of Hypotheses

The following null hypotheses provided the foundation for statistical tests used to analyze the data resulting from this study.

H_{O1}: There is no statistically significant difference in pre- and posttest scores of first grade students who received comprehension strategy instruction embedded in teacher read alouds.

H_{O2}: There is no statistically significant difference in pre- and posttest scores of first grade students who participated in student-directed literature discussions of teacher read alouds.

H_{O3}: There is no statistically significant difference in mean gain scores for first grade students who have received comprehension strategy instruction through the teacher read aloud and those who did not receive comprehension strategy instruction through the teacher read aloud.

Definition of Terms

Aesthetic reading: a reading stance whereby the reader's attention is primarily focused on the experience of reading the text (Rosenblatt, 1978, p. 26).

Comprehension: The process of constructing meaning from reading (Fountas & Pinnell, 1996, p. 156).

Comprehension monitoring: Noting of one's successes and failures in developing or attaining meaning, usually with reference to an emerging conception of the meaning of the text as a whole, and adjusting one's reading processes accordingly (Harris & Hodges, 1995, p. 153).

Comprehension strategies: Deliberate decisions made by the reader in order to aid reading comprehension occurring before, during, and after reading (Pressley, 2002).

Efferent reading: A reading stance whereby the reader's attention is primarily focused on information to be acquired from the text (Rosenblatt, 1978).

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Inference: Information derived by garnering clues from the text and thinking ahead to make a judgment, discern a theme, or speculate about what is to come (Harvey & Goudvis, 2000).

 Metacognition: The awareness and control of one's own thinking processes (Flavell, 1976).

Schemata: Background information that a reader may activate to aid in reading comprehension (McCormick, 1999).

 Text-to-self connections: Connections readers make between the text and their past experiences or background knowledge (Harvey & Goudvis, 2000).

Text-to-text connections: Connections readers make between the text they are reading and another text, including books, poems, scripts, songs, or anything that is written (Harvey & Goudvis, 2000).

<div align="center">Scope and Limitations</div>

The current study was limited to first grade students from one participating school located in an urban Alabama community; however, the results may have implications for instruction delivered to first grade students anywhere. These research questions and the results of this study may also provide information to guide additional educational research. This study attempted to determine the effectiveness of comprehension strategy instruction embedded in the teacher read aloud on first grade students' reading comprehension abilities. Students participating in this study represented on-grade-level reading ability first graders. Results obtained will extend the current knowledge base in the field of reading comprehension instruction.

There are limitations that require consideration. First, the researcher utilized pre-existing data obtained from the local school, which may not be an absolute measurement of decoding ability and reading fluency. For example, the DIBELS nonsense word fluency (NWF) assessment measures accuracy and automaticity in letter sound knowledge, but does not account for the ability to blend sounds together to read whole words. The DIBELS oral reading fluency (DORF) assessment measures reading rate and accuracy, but does not account for other features of reading fluency such as expression and phrasing. Furthermore, the possibility of inconsistencies in the administration and scoring of DIBELS assessments may exist. Finally, errors in students' recording of answers on the DRP may possibly exist.

Assumptions of the Study

The study is grounded in the following assumptions:

- The administration, scoring, and reporting of all student achievement scores as measured by DIBELS NWF and DORF were accurate.

- The data obtained represent each student's best effort on the employed measures of reading achievement.

- The participants in the study were a representative sample of students with on-grade-level reading ability in the state of Alabama.

Significance of the Study

Comprehension was identified by the National Reading Panel (NICHHD, 2000) as one of the five big ideas in reading instruction, and the Panel devoted a section of its report to recommendations for professional development that trains teachers to deliver effective reading comprehension instruction. The Alabama Reading Initiative (ARI) and

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other states' reading initiative programs provide professional development to teachers based on the scientifically based reading research summarized by the Panel. There were no studies involving students below second grade in the experimental and quasi-experimental studies of multiple comprehension strategies instruction that were included in the National Reading Panel (NRP) Report. The results of this study with first graders add to the knowledge base related to comprehension instruction and inform practices that will enable teachers to more effectively and efficiently teach comprehension in the primary grades.

II. REVIEW OF LITERATURE

Introduction

The first chapter provided a theoretical framework for this study, stated the

purpose of the study, the research questions, the statements of the research hypotheses,

definition of terms, limitations and assumptions of the study, and explained the

significance of this study. This chapter contains a review of literature that provides a

synthesis of research concerning reading comprehension strategies. This chapter is

divided into three key sections: 1) Higher-order processes of skilled reading, 2)

Theoretical basis for comprehension strategy instruction, and 3) Comprehension strategy

instruction.

Higher-Order Processes of Skilled Reading

The ultimate goal of reading educators is to develop skillful active readers. But in

order to achieve this goal, one must possess a clear understanding of just what skillful

reading is. The proficient reader often comprehends in a seemingly effortless manner by

reading and automatically summarizing text. However, when encountering more difficult

text, the proficient reader copes with the text challenges by selectively using

comprehension strategies (Pressley, 2002). Verbal protocol studies primarily conducted

in the 1980's and 1990's sought to identify comprehension strategies that represent how

proficient readers cope with comprehension difficulties as well as to identify which

strategies readily lend themselves to being taught. In many of these studies, skilled adult readers were asked to stop during reading and verbalize what they were thinking or doing as they read challenging text. This procedure is referred to as a *think aloud*. Proficient readers were found to actively engage with the text during reading by coordinating a number of cognitive strategies.

One of the earliest verbal protocol studies targeting reading comprehension was the work of Olshavsky (1977). The subjects in her study were asked to read short stories, stopping at predetermined points in the text in order to verbalize the thoughts that had occurred to them during reading. Olshavsky used the think-aloud procedure with skilled and less skilled readers who were sometimes reading independent level text and sometimes reading more challenging text. Olshavsky categorized the readers' responses into two categories: problem identification strategies and problem solving strategies. Kucan and Beck (1997) stated, "The publication of Olshavsky's (1977) article 'Reading as Problem Solving: An Investigation of Strategies' in *Reading Research Quarterly* brought the representation of reading as problem solving and the usefulness of verbal protocols in identifying the strategies that readers use to the attention of the reading research community at large" (p. 276).

Pressley and Afflerbach (1995) reviewed all the studies published through 1993 involving think-aloud analyses in order to publish their own summary of the processes involved in skilled reading. These studies targeted a diverse group of subjects, ranging from fourth graders to adult professionals. The reading tasks in these studies varied as well. Whereas some texts were a good match for readers' abilities, others were more challenging. The vast majority of the studies involved natural reading of intact text.

One such study (Wyatt, et al, 1993) was conducted at the University of Maryland where 15 social science university professors were asked to perform think alouds while reading self-selected professional article. All of the articles differed in content; however, the researchers were able to identify commonalities among the readers of different articles, resulting in a general summary of reader behaviors. After overviewing the text, these skillful readers set a purpose for reading, remained aware of that purpose during reading, and actively sought information related to their personal reading goal. When a reader encountered information addressing the reading purpose, the reading rate slowed considerably. The readers combined their background knowledge with the text content to read in an anticipatory manner. Predictions were made, modified, confirmed, or rejected as the reader read further in the article and encountered more information. Although most reading occurred while reading pages in a chronological order, the readers were not bound by the order of the text and sometimes skipped text sections as they moved ahead in search of particular information or returned to previously read sections in order to clarify text content. The readers continuously gauged how difficult the text was for them as they self-monitored their comprehension while reading. When the reading became difficult, the reader again slowed his reading rate and only increased the rate when the text was found to be easily read and understood. Thus, reading rates were adjusted by the reader and were influenced by interest in the text content and by the moment-to-moment proficiency of the reader. The readers consistently summarized text as they read while clarifying text content and judging whether or not these personal summaries made sense. Emotions were evident when the reader made judgments concerning the text. Sometimes these judgments prompted praise when the reader was in agreement with the text.

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However, the readers also argued with the text when they disagreed with text content. Thus, the reader considered whether or not the text was consistent with his own biases, beliefs, and expectations, and reacted accordingly.

Another verbal protocol study included in the summary published by Pressley and Afflerbach (1995) examined how readers construct main ideas that are not explicitly stated in the text (Johnston & Afflerbach, 1985). The data were derived from two graduate students and one assistant professor. In this study, the subjects were asked to read and construct main idea statements from extremely difficult text passages. The subjects were told to verbalize their thoughts as they attempted to accomplish the assigned task. Difficult text passages were purposefully chosen because proficient readers have considerable practice constructing main ideas from text, which results in automaticity for use of this strategy. Automaticity severely limits the verbal reports as the reader tends to process the text in an effortless and unconscious manner. When faced with sufficiently challenging text, the reader reverts to conscious control of the processes, resulting in more detailed verbal reports.

The readers in this study often hypothesized main ideas prior to actually reading the passage in depth by previewing the text and noting key phrases or words that activated schematic knowledge. The initial main idea hypothesis was then verified, refined, or discarded based on subsequent text information gained through a more thorough reading of the text. In cases where the reader had some prior knowledge, the hypothesizing strategy worked efficiently with little additional effort. The hypothesizing strategy failed when the reader had almost no prior knowledge related to the text content from which to draw support.

During reading, the subjects used a strategy referred to as "crunching" (Johnston & Afflerbach, 1985, p. 213) to construct a main idea. The researchers described this strategy as a seemingly passive reader behavior. When crunching, the reader stopped reading and waited for automatic processing of the information already taken into the working memory. This strategy resulted in linking small bits of information and freed up additional working memory space, which allowed the reader to continue working towards comprehension of the main idea.

When the reading was particularly difficult, the reader often returned to the text to select and list important words and phrases while skimming previously read sections in an effort to construct main ideas. Listing words and phrases seemed to aid the crunching strategy. An example of this strategy follows:

> Okay…just searching through that little pile of grist…uh…these two
>
> guys…I guess later than Bessou and Pages…and they're doing something
>
> more on these…nerve endings…doing some sort of experiment (Johnston &
>
> Afflerbach, 1985, p. 213).

Intertwined with main idea construction is the use of proficient reader strategies that determine importance and organize the information from the text. The readers in this study used a "foot-in-the-door" (Johnston & Afflerbach, 1985, p. 215) strategy when confronted by difficult text. Using this strategy, the reader selected certain familiar words or phrases to formulate a main idea statement. Readers lacking prior knowledge of a text topic attempted to use personal knowledge to create analogies to the text content. Readers were also sensitive to concept overlap. When certain words, phrases, or thoughts

were repeated in the text, readers tended to believe that the overlap signified importance of content.

Pressley and Afflerbach (1995) cited 37 studies as being the most important primary documents used in their analysis of the verbal protocol studies conducted through 1993. The analysis of these studies yielded a wealth of information about comprehension strategies used by proficient readers before, during, and after reading, thereby allowing Pressley and Afflerbach to develop a summary of behaviors related to comprehension. This summary was later reported by Pressley (2002) and includes the following six descriptions of comprehension processes exhibited by skillful readers before, during, and after reading.

1) Proficient readers set a purpose for reading and preview text for relevancy to that reading goal. The reader may then decide to read the text in its entirety, read only portions of the text, or not to read the selection at all, depending on how the text addresses the reader's needs. Previewing the text enables the proficient reader to begin connecting ideas from the text content with the reader's prior knowledge as well as to begin forming a summary of the text information derived from the initial overview. And finally, the proficient reader will make an initial prediction as to the text content, while recognizing that this prediction might be refined or discarded as the reader gains more information in the subsequent more in-depth reading of the text.

2) During reading, proficient readers are always mindful of their purpose in reading and actively seek text information related to their goal. When reading related information, the proficient reader slows down the reading speed as the information is carefully processed. Generally, reading is accomplished from front to back of a book or

article; however, proficient readers may skip ahead in a text or re-read earlier portions of the text in an effort to clarify understanding or seek information that is related to their purpose.

3) There is a great deal of self-monitoring employed by proficient readers. This aspect of metacognition, or thinking about thinking, makes the reader aware of potential comprehension problems when they arise. Skillful readers know when a text is too challenging to understand or when little effort is required to comprehend a text. Proficient readers are mindful of whether or not the text content is familiar to them. When comprehension breaks down, the proficient reader attempts to solve the problem.

Skilled readers continuously predict upcoming text content, draw conclusions, and form interpretations throughout reading. However, they are aware that these predictions, conclusions, and interpretations are a work in progress and are subject to change with new information derived from the text as the reading continues. Proficient readers integrate ideas from different points in the text and use these ideas to filter their predictions, conclusions, and interpretations.

4) The proficient reader makes multiple conscious and unconscious inferences while reading. These inferences aid the reader in better understanding the text, depending on the reader's needs. The reader may infer to determine meanings of unknown words or phrases, identify pronoun referents, create explanations, or elaborate on text events. Inferences are also often made about the author of the text and judgments are made about writing style and purpose. These inferences often result in interpretations made by the proficient reader, which may involve constructing personal images of text events, relating the text to personal experiences, world events, or other texts, and

paraphrasing or summarizing the text. Prior knowledge is an important filter, through which the inferences pass in the creation of text interpretations by the reader.

5) During reading, proficient readers may also express interest or boredom with the text. They constantly evaluate what they are reading and may argue with or cheer on the author depending on their personal feelings, which are influenced by the reader's prior knowledge regarding the text subject.

6) Proficient readers often continue to process the text after the front-to-back reading is complete. They may return to text sections that are deemed important, summarize the text, or reflect on the text meaning.

Perhaps a strategy recognized as one of the most crucial for comprehension is the activation of prior knowledge (Anderson, 1978) to make a schema connection to the text. However, merely recalling related knowledge while reading does not make one a strategic reader. In their verbal protocol study involving 80 junior high students, Bereiter and Bird (1985) found, "The isolated recall of related knowledge appeared to be largely spontaneous and irrelevant to text comprehension" (p. 140). In fact, it has been noted by others (Beck & McKeown, 2001; McKeown & Beck, 2003; Stahl, 2004) that younger students, specifically first graders, were very often led away from the text content while discussing personal experiential connections to the text content, resulting in less accurate recall of the text. Instead of retelling text content, these students reported the recollections and connections they had shared when asked to recall text content. Thus, it is not until the reader filters actual text content through his prior knowledge that enhanced comprehension results and making a schema connection becomes a strategic reading skill.

Pressley and Afflerbach's analysis of skilled reading (1995) pointed out the importance of making both conscious and automatic, unconscious inferences while reading. Indeed, the reader's inferences enable the reader to fill in information gaps while connecting parts of text to create a meaning for the whole text instead of isolated bits of text information. Laing and Kamhi (2002) reported findings from a 1989 unpublished doctoral dissertation by Suh. Suh's study included college students using the think-aloud model to examine reading inferences. Suh grouped inferences into three types: predictions, associations, explanations. The reader makes a predictive inference when he surmises what event may arise next in the text based on the past events in the story. Associative inferences are assumptions about characters, objects, events, or actions in the text. Explanatory inferences offer causal explanations for an event, action, or state in the text. For example, after reading the text sentence, "So I ran upstairs into my room to find a place to hide." A predictive inference statement is, "The character is going to crawl under the bed." An associative inference for a male reader is, "This is about a little boy." An explanatory inference is, "He's hiding because he's scared." Suh found that the majority of inferences made by the college students participating in the study were explanatory or causal inferences. Suh suggested that skilled comprehension is largely a by-product of making explanatory inferences.

Van den Broek, Lorch, Linderholm, and Gustafson (2001) looked at the effect of reading purpose on inference generation by college students while reading expository text. Eighty participants were asked to read for one of two purposes, for studying or entertainment. The inference generation activity was recorded through think alouds. The researchers found that reading purpose had a profound effect on the types of inferences

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made by the readers. Students reading for the purpose of studying made significantly more explanatory and predictive inferences, whereas students with an entertainment goal were more likely to make associative inferences. Thus, while explanatory inferences may be more indicative of skilled comprehension as suggested by Suh (1989), it appears that the proficient reader primarily makes this type of inference during efferent reading.

Laing and Kamhi (2002) sought to compare the number and types of inferences constructed by average and below-average third grade readers in a study involving 40 children from a rural, low-socioeconomic-status community. Participants were divided into two groups based on their performance on reading subtests for word identification, word attack, and passage comprehension. Both groups were determined to have average intelligence based on nonverbal intelligence tests, but the members of one group were determined to be average readers while the members of the second group were determined to be lower-ability readers.

The participants listened to two stories at the third-grade readability level and were asked three literal and three inferential questions following each read-aloud event. The average-ability readers made more frequent and more accurate inferences than lower-ability readers. The average-ability readers also generated more explanatory inferences than any other inference types. Of all the inferences made by average-ability readers, 46% were explanatory, which was significantly higher than the percentage for the lower-ability readers for whom only 36% of the inferences were explanatory.

Trabasso and Magliano (1996) reasoned that explanatory inferences also link propositions in a story as the reader creates a meaningful representation of the text. As the reader continuously recalls and preserves causal information, which links story

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propositions, the information remains in the reader's working memory, which aids the reader in answering comprehension questions. This suggests that readers who make more explanatory, causal inferences will score higher on measures of comprehension than readers who make fewer explanatory inferences.

Phillips (1988) sought to determine the inference strategies used by sixth grade readers as they attempted to comprehend text. Eighty students from two Canadian cities, one city from the prairie region and one city from the Atlantic maritime region, participated in the study. From each city, twenty students whose scores on the Vocabulary and Comprehension subtests of the Canadian Test of Basic Skills were above the 85th percentile participated in this study and were labeled high-proficiency readers. Twenty students from each city whose scores on the same test were below the 50th percentile also participated and were labeled low-proficiency readers. Participants in each group were randomly assigned to read three of six passages. Three passages related to prairie activities and three passages related to maritime activities.   Thus, there were four final groups of participants: 10 high-proficiency readers in the high-background-knowledge group, 10 high-proficiency readers in the low-background-knowledge group, 10 low-proficiency readers in the high-background-knowledge group, and 10 low-proficiency readers in the low-background-knowledge group. The subjects met with the researcher individually and were asked to verbally share their thinking while reading the assigned passages. The sessions were tape-recorded and analyzed at a later date to determine which inference strategies were used by high-proficiency readers and low-proficiency readers.

Phillips found that highly proficient readers questioned or confirmed their earlier inferences based on textual information immediately following those inferences. Highly proficient readers also tended to empathize with characters from the story and used that empathy to draw inferences without losing focus of the story. Low-proficiency readers were more apt to misconstrue the text by making incorrect inferences in attempts to make the text fit their expectations.

Cain, Oakhill, and Lemmon (2004) investigated the extent to which skilled and less skilled 9- and 10-year-old readers differed in their ability to infer the meaning of unknown words in connected text. Twenty-five participants, 12 skilled and 13 less skilled readers, from urban schools in Britain were given eight short stories to read. Each of the stories was written by the researchers and each contained a made-up word with a novel meaning. The meaning of the unknown word could be determined from text context either immediately following (near condition) the unknown word or after one or two filler sentences (far condition). A sample story featuring the near condition follows:

Lucy was taking her dog, Ben, to the park. First she had to find Ben's *wat.* Her dad suggested taking a football, but that was not quite right. Their football was far too big to play with, and it had lost its bounce.

She searched all the rooms in the house, even the kitchen. During her hunt, she found all sorts of things: her hair band that had been missing for a month, an overdue library book, and even her grandma's false teeth!

An alternate version story featured the far condition:

Lucy was taking her dog, Ben, to the park. First she had to find Ben's *wat*. She searched all the rooms in the house, even the kitchen. During her hunt, she found

all sorts of things: her hair band that had been missing for a month, an overdue library book, and even her grandma's false teeth! Her dad suggested taking a football, but that was not quite right. Their football was far too big to play with, and it had lost its bounce.

 Each participant read four stories in each condition. The researcher initially covered the text following the sentence featuring the unknown word and asked the child to read the uncovered sentence with the unknown word. When the child read the sentence, the researcher asked the child what the unknown word meant. The responses were recorded to be scored at a later time. The child then finished reading the story. The researcher then again asked the child what the unknown word meant, but added, "You can stick with your first idea or you can change your mind" (p. 679). Scoring was based on the child's response: 0 points for an incorrect definition, 1 point for a partially correct definition, and 2 points for a complete definition. The researchers determined a use of context score by subtracting the score obtained before the useful context from the score obtained after the useful context. A two-way analysis of variance (ANOVA) was performed on the scores with factors of reading skill (skilled, less skilled) and condition (near, far) as factors. The results indicated that skilled readers were more likely to determine the meaning of unknown words from text content than were less skilled readers. In addition, less skilled readers were less likely to determine the word meaning when the targeted word and useful context were separated by filler text. Skilled readers were not affected by this condition.

As the aforementioned research indicates, proficient readers acquire the ability to navigate text processing by employing a wide range of strategies such as inferring,

activating prior knowledge, and self-monitoring of comprehension as they read. The descriptions of skillful reading behaviors that were included in this section provide a backdrop for the following discussion of prominent theories that have influenced comprehension strategy instruction.

Theoretical Basis for Comprehension Strategy Instruction

This study is grounded in Vygotsky's (1978) prominent theory of language and cognition and in Louise Rosenblatt's reader response or transactional theory (1978).

Vygotsky's theory of cognitive development (1978) came to prominence in the late 1970's and early 1980's. Vygotsky stated that interactions which facilitate development are those occurring with tasks that children can do with adult assistance. Vygotsky referred to this developmental area, consisting of behaviors which are beyond the child's ability to perform independently, but which can be achieved with assistance, as the zone of proximal development. The more capable adult provides scaffolding, a type of guided assistance. The adult evaluates the child's task performance to determine the present level of independent performance and then gives only the support required by the child to move to a slightly higher level of performance. Responsibility for the task performance is gradually released to the child as the scaffolding assistance, which largely consists of prompts given by the adult so that the child is able to problem-solve, lessens. Vygotsky referred to this process of diminished scaffolding as the gradual release of responsibility. Vygotsky's ideas provided a theoretical foundation for researchers and educators who believed that comprehension strategies are not fully developed in children, but can be developed with adult assistance (Pressley, 2002).

Pressley (2002) reported the work conducted in the late 1960's and 1970's by Meichenbaum, in which Meichenbaum proposed that adults should interact with children in the zone of proximal development using highly directive speech in the beginning stages of scaffolding and before gradually releasing responsibility. Meichenbaum believed that as the adult's speech gradually lessened, the child increasingly internalized the directive speech. Pressley (2002) reported the findings of a study by Bommarito and Meichenbaum where comprehension strategies were taught to middle-school students who were able to decode, but struggled with comprehension of text. In this instruction, which lasted for six sessions, the adults modeled reading and gave highly directive verbalizations such as:

Well, I've learned three big things to keep in mind before I read a story and while I read it. One is to ask myself what the main idea of the story is. What is the story about? A second is to learn important details of the story as I go along. The order of the main events or their sequence is an especially important detail. A third is to know how the characters feel and why…While I'm reading I should pause now and then. I should think of what I'm doing. And I should listen to what I'm saying to myself. Am I saying the right things? Remember, don't worry about mistakes. Just try again. Keep cool, clam, and relaxed. Be proud of yourself when you succeed. Have a blast (Pressley, 2002, p. 248).

The students were able to gradually move to self-verbalization and a subsequent comprehension assessment showed significant gains by the experimental group receiving the verbalization training. Thus, Meichenbaum's findings indicated that comprehension

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strategy instruction could be successfully delivered through the modeling and overt verbalization of comprehension strategies used by a proficient adult reader who gradually released responsibility to students who then performed these strategies independently during reading (Pressley, 2002).

Another theorist, Louise Rosenblatt, proposed that readers transact with the text and that this transaction is an active and reciprocal process between the text and the reader (Rosenblatt, 1994). Rosenblatt stated that because each reader is unique, as well as each moment in time is unique, the transactions between the text and the reader will differ for each reader and quite possibly differ with each reading, even of the same text, that one person does at different points in time. Rosenblatt proposes that the reader's "primary subject matter is the web of feelings, sensations, images, ideas, that he weaves between himself and the text" (Rosenblatt, 1994, p 137).

Rosenblatt refers to this "lived-through process of building up the work under the guidance of the text" as the process of evocation (Rosenblatt, 1994, p. 69). Interpretation, according to Rosenblatt, is the "effort to describe in some way the nature of the lived-through evocation of the work." (Rosenblatt,, 1994, p. 70). The value of literature discussions in forming an interpretation of the text is certainly acknowledged by Rosenblatt. A passionate evocation will often prompt the reader to talk about the experience with others. Rosenblatt stated:

> We are used to thinking of the text as the medium of communication between author and reader. Perhaps we should consider the text as an even more general medium of communication *among readers*. As we exchange experiences, we point to those elements of the text that best illustrate or support our

interpretations. We may help one another to attend to words, phrases, images,

senses, that we have overlooked or slighted. We may be led to reread the text and

revise our own interpretation (Rosenblatt, 1994, p. 146).

Hence, literature discussions may be far more valuable than the traditional literature

extension activities that take place in many classrooms. In fact, Rosenblatt addresses

parallel but separate aesthetic endeavors:

Some few, in order to achieve as direct a transfer of experiences as possible,

attempt to use artistic means, words or some other medium, to parallel the

feelings, the tensions, the moods, of the work. We are being asked to engage in

another aesthetic transaction deemed analogous to the one the interpreter has lived

through. This usually simply compounds the original problem and draws the

attention away from the original transaction or work of art, which then serves

mainly as a stimulus for a new creative enterprise. Moreover, probably no work

of art can suffice as interpretation of another work. To do full justice to the

literary transaction, we want not only to depict the work as we envision it but also

to characterize it in terms of the second stream of responses that contributed so

much to its texture and import. Hence in most instances the reader or critic

resorts to words as the medium of interpretation (Rosenblatt, 1994, pp. 135-136).

Thus, while Vygotsky lays the foundation for explicit teacher modeling of

comprehension strategies and gradual release of responsibility to the student in

independent strategic use of those strategies, Rosenblatt encourages the

acknowledgement of the uniqueness of the individual's response to the text and the value

of extending one's own comprehension through social communication with other readers.

The following discussion of comprehension strategy instruction certainly reflects the important contributions made by these two theorists.

Comprehension Strategy Instruction

Proficient readers are active, involved, motivated, and passionate in their reading and enjoy discussing books that they have read or are currently reading with other readers. Research has identified commonalities in comprehension strategies used by proficient readers and has shown that developing readers can be taught to successfully use these same strategies.

In the early 1980's, Palincsar and Brown (1984) took research findings on comprehension strategies used by proficient readers and incorporated the instruction of several of those strategies into a method called *reciprocal teaching*. Palincsar and Brown (1984) published the results of two studies involving struggling seventh grade readers. In the first study, the researchers delivered the treatment instruction. A later study featured volunteer teachers using reciprocal teaching with already intact reading groups.

Reciprocal teaching trains students in four comprehension monitoring and comprehension fostering activities by embedding them in teacher-student dialogue during readings of sections of text for the expressed purpose of understanding what one reads. The activities are summarizing, questioning, clarifying, and predicting. The ultimate goal is to provide reciprocal teaching in the context of guided reading lessons. The training is designed to scaffold the students by providing an expert model of the use of these comprehension activities and to guide the students to practice using the selected activities at increasingly higher levels of competence and longer sections of texts. As students become proficient at predicting, clarifying, questioning, and summarizing, they take turns

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assuming the role of teacher and orchestrate discussions of strategy use to build meaning with their peers and the teacher who takes the role of student participant. This method is based in part on Vygotsky's idea of the *gradual release of responsibility*, whereas the more capable adult guides the student in learning a new skill by modeling the skill and gradually having the student assume responsibility for the task as the student works within his zone of proximal development. Each student's zone of proximal development encompasses the tasks that the student is able to successfully accomplish with assistance from someone more capable.

In Palincsar and Brown's first study (1984), participants were 24 seventh grade students who were identified as adequate decoders but found to have significant comprehension difficulties. The students' IQ scores ranged from 67 to 99 with a mean score of 83. The students were divided into four groups with two groups receiving instruction. Group 1 received reciprocal teaching instruction while Group 2 received instruction in locating information. Group 3 took all of the tests the first two groups took, which included a pretest comprehension assessment to obtain a baseline measurement, daily comprehension tests consisting of independently reading a passage and answering ten comprehension questions concerning the passage from memory, and a posttest given six months later in order to determine maintenance of comprehension ability. However, group 3 participants received no intervention instruction. Group 4 took only the pretest and posttest assessments, and received only the normal classroom reading instruction. All of the reading passages used in the study were confirmed to be seventh grade reading level and were expository, covering a broad range of topics.

The six students in the treatment group were partnered with each other to form three groups of two students. All three partner groups worked with the teacher in different sessions. The adult teacher began each day with a short discussion designed to help activate students' prior knowledge. The adult teacher then chose a student to act as the guiding teacher for the next section of text. This student teacher was scaffolded by the adult teacher as needed and was challenged to perform at a higher level with each performance.

Five of the six students improved on comprehension assessment performance to the level set by normal seventh-grade readers. The lone student not reaching the average seventh-grade level did improve significantly. This student was able to improve her average of 10% correctly answered comprehension questions to consistently answering 50% of comprehension questions correctly. The other two groups assessed by daily comprehension measurements failed to show improvement on the daily assessments and, in fact, did not differ significantly from the control group on the posttest measure.

In the second study, a total of 21 sixth, seventh, and eighth grade students with adequate decoding skills but weak comprehension skills were included. The students were from four intact reading groups. The group sizes ranged from four to seven students. The adult teachers were trained by the researcher in the reciprocal teaching method in three training sessions. In the first session, the researchers explained the rationale behind reciprocal teaching and informed the teacher participants of the results obtained from the first study. The teacher participants watched a reciprocal teaching lesson demonstrated by the researchers in the second training session and then, in the final training session, the teachers delivered a reciprocal teaching lesson to a group of

seventh grade students who were not participating in the study while the researcher observed and gave feedback concerning the lesson. As in the first study, the effect of the reciprocal teaching intervention resulted in significantly increased comprehension ability. The participants began at a level of approximately 40% accurate and concluded at a level of 80% accurate. Both teachers and students responded favorably to reciprocal teaching and expressed a desire to continue its use in the classroom.

Palincsar and Brown (1986) also noted that reciprocal teaching showed promising results when used with very young readers in a small group setting. In a 1986 study, first grade teachers worked with small groups of six students: two above average students and four struggling readers. Students' initial ability levels were assessed by standardized reading and listening comprehension measures and by teacher observation. The same reciprocal teaching methods were used as with older students; however, the texts were read aloud by the teacher. The study found that students' comprehension ability improved and that students eagerly participated in reading discussions while using the four comprehension strategies.

Rosenshine and Meister (1994) reviewed 16 quantitative studies featuring reciprocal teaching, which included studies published in peer-reviewed journal articles and unpublished studies indexed in Dissertation Abstracts International. There were three criteria for selected studies: explicit use of the words *reciprocal teaching*, a reference to the 1984 work of Palinscar and Brown, and use of experimental and control groups, in which the participants were either randomly assigned or determined to be of similar ability on initial reading comprehension measures. The number of strategies taught in these studies ranged from two to ten. However, no relationship between the

number of strategies taught and student achievement was found. Likewise, the number of instructional sessions ranged from 6 to 25 sessions, but there was no relationship found between student achievement and number of sessions. The review included studies with instruction delivered by both teachers and instruction delivered by the researchers with both conditions found to be equally effective. The instructional groups ranged in size from 2 to 23 students, but there was no relationship found between group size and student performance on outcome measures of comprehension. Statistically significant positive results were noted for effects of reciprocal teaching in studies involving participants from fourth grade students through adulthood; however, there were insufficient data to determine the effectiveness of reciprocal teaching with third grade students.

At the same time Palincsar and Brown were examining the effects of their reciprocal teaching model, Roehler and Duffy (1984) proposed a method of teaching comprehension strategies to young readers that began with intense teacher-modeling of the featured strategy. The initial modeling was accomplished through mental modelings whereby the teacher named the reading strategy and demonstrated how it could aid comprehension as he or she did a think aloud while reading text. Duffy et. al (1988) stated that the purpose for mental modeling is to show novice readers the invisible mental processes, which are at the core of reading. Instructional ambiguity, a serious threat to poor readers who have limited background knowledge of what constitutes good reading, is reduced by explicitly teaching the strategy through the think-aloud. The ultimate goal of mental modeling is for the student to gain metacognitive control of the reasoning connected with comprehension strategies in order to apply the use of these strategies in other texts. When teachers ask questions and check student responses before, during, and

after reading a text, the students may comprehend that particular text, but empowering the students with an understanding of the general process of comprehension extends beyond the comprehension of any one text.

After watching the teacher model the strategy, students were then encouraged to try out the strategy themselves while the teacher provided scaffolding. Once again Vygotsky's idea of a gradual release of responsibility (1978) was used as teachers provided scaffolding as needed to support the students' attempts to apply the strategies.

In a later study that lasted an entire academic year, Duffy (1987) trained third grade teachers to explain, model, and guide students in using comprehension strategies. Ten groups of struggling readers were randomly assigned to the direct explanation of comprehension strategies intervention while ten other groups of struggling readers were assigned to a control group that received regular classroom instruction. The treatment groups scored significantly higher than the control groups on end of the year standardized measures of reading. In addition, the treatment group maintained higher scores than did the control group on a standardized measure of reading achievement a year after the intervention was concluded.

Pressley (2002) coined the term *transactional strategies instruction* to describe comprehension instruction that extended the Duffy and Roehler (1984) direct explanation model. In transactional strategies instruction (TSI), the social aspect of reading is encouraged through group discussions about the text. When children are involved in these discussions, their comprehension is likely to grow (Van den Branden, 2000). Thus, TSI provides peer and teacher scaffolds for each group member with the ultimate goal

that group members will internalize the process learned through the group interactions and increase their comprehension when reading independently (Pressley et al, 1992).

Brown (1995) further described the transactional nature of TSI. First, the meaning of the text is not found only in the reader's mind or in the text alone, but rather is determined through transactions between the reader and the text (Rosenblatt, 1978). In addition, TSI teaches students to collectively interpret the meaning of the text through group discussions. And finally, the teacher's instructional actions are determined in part by the students' reactions during the aforementioned discussions.

In a year-long quasi-experimental study, struggling second graders' ability to recall a story and to make personal interpretations about text for groups receiving the experimental treatment of TSI or regular classroom reading instruction were compared (Brown, Meter, Pressley, & Schuder, 1996). The students receiving TSI were found to have better text recall, both literally and interpretatively. The TSI students also scored significantly higher on spring standardized tests of reading comprehension and word study skills than control group students. The authors of the study reported that the TSI students demonstrated a greater ability to independently and successfully use strategies while reading difficult text and were able to acquire more information from the text they read.

Schuder (1993) described an additional study of TSI in a supplemental reading program, Students Achieving Independent Learning (SAIL) for at-risk students. The authors of the program described SAIL instruction as "prototypical of transactional strategies instruction" (p. 195). They explained the objectives of SAIL: to develop fully informed, self-controlled, and active learners who know what a strategy is, how it is

useful to the reader, and when and how to use particular strategies. The most competent

SAIL teachers received three and a half days of training in their first year, which was

followed by support provided by peer coaches and teacher specialists. On the average,

the authors found that three to five years training and support were necessary for teachers

to experience a high degree of success. Students in the SAIL program were assessed in

ways that evaluated their ability to independently apply strategies and measured the

number of strategies they are capable of using proficiently. At the beginning of the

school year, SAIL teachers explicitly taught targeted strategies. Students gradually took

on the responsibility of choosing to activate specific strategies after evaluating the

demands of the text. Teacher reports were very positive about the effects of SAIL

instruction on at-risk students and the standardized achievement test results of those

students.

Reciprocal teaching, direct explanation, and transactional strategies instruction are

instructional methods that have been used to successfully deliver comprehension

strategies instruction. Most of the research with these methods has focused on students

seven years of age and older. One study did include participants of varying ages, the

youngest of which were six-year-olds. In this study, McGee and Johnson (2003) sought

to examine the effect of inference training on skilled and less skilled children between the

ages of six and nine in the United Kingdom. Participants were accurate and automatic

decoders; however they differed in their comprehension ability as identified by their

performance on the Neale Analysis of Reading Ability, an age-related measure of reading

accuracy and comprehension. Twenty skilled readers and twenty less skilled readers were

randomly assigned to two interventions, inference training intervention or comprehension exercises.

The participants met with the researcher in small groups of five for six sessions lasting 20 minutes each. Participants in the inference training group were taught three main activities: lexical inference, question generation, and prediction. The purpose of the lexical inference instruction was to teach children how to use key words to understand the text and what types of inferences could be made from certain words. Students inferred that a character in the story was taking a bath from the key words steam, towel, and soap. Question generation instruction guided students to lead the group by asking questions regarding the text content of the other members in the group. Both the questions and responses by student members indicated that the participants were becoming more skilled in making complex inferences as the study progressed. Prediction instruction featured covering part of the text, having students read, and predict what the hidden part of the text might be, based on the text that was read. The control groups in this study were not inference trained, but they were given comprehension exercises in which students read passages and answered questions regarding text content.

At the end of the six training sessions, the participants were given an alternate form of the Neale Analysis of Reading Ability. The results indicated that both skilled and unskilled readers benefited from each of the interventions, inference training and comprehension exercises. However, the amount of reading ability growth was significantly greater for the inference training intervention with a mean increase of 15 months as compared to a mean increase of 9 months for the comprehension exercises intervention. In addition, further analyses indicated that less skilled comprehenders

benefited significantly more than skilled comprehenders when given inference training. The mean score of less skilled comprehenders increased by 20 months as compared to a mean score increase of 9 months for the skilled comprehenders.

Very few studies specifically targeting first grade students were found while reviewing recent research. Smolkin and Donovan (2001) described a two-year study with first grade students from two different schools. In this study, the teacher chose informational books to read aloud to the children in a whole group setting. The authors of this study proposed that first grade children are not developmentally ready for comprehension instruction, but instead would benefit from interactive read alouds where comprehension strategies were demonstrated by the adult teacher as the situation requiring their use naturally occurred. However, the strategies being used were not explicitly named or taught. Smolkin and Donovan found that the participants experienced opportunities to connect parts of the text, activate prior knowledge, summarize, examine text structure, create mental imagery, generate questions, and monitor comprehension. This study added anecdotal information and raised questions about developmentally appropriate approaches to comprehension strategies instruction in the early grades, but it did not address these issues experimentally.

Eilers and Pinkley (2006) sought to determine the effects of explicit instruction of comprehension strategies on first graders' reading comprehension ability as measured by the Beaver Developmental Reading Assessment (DRA) (Beaver, 1999). The targeted comprehension strategies in this study included using prior knowledge, predicting, and sequencing. The authors of the study also created a Comprehension Strategy Checklist, a tool used to report students' use of the targeted strategies during independent reading

tasks. The 24 students met in both whole group and small group settings daily during a 9-week period. Whole group sessions met during story time and included instruction which introduced each comprehension strategy in a progressive order through teacher modeling. Additionally, students met in one of six homogenous small groups once a week for 30 minutes with the teacher. During this time the students read appropriately leveled assigned trade books and discussed the use of selected comprehension strategies.

The researchers found that DRA scores were significantly higher after students received explicit whole group and small group comprehension strategies instruction than before the study began. Additionally, students' use of comprehension strategies was assessed using the Comprehension Strategy Checklist during small group instruction. Anecdotal records were added to the checklist form to indicate use of strategies. A sample entry follows:

> During week four of the project a student was observed sharing an unsolicited connection. Jumping out of his seat the student stated,
>
> "I have a text-to-self connection! When I read 'he opened his wide mouth' it reminded me I went on a walk and saw a snake" (p. 26).

The researchers analyzed the checklist by searching for patterns of behaviors. Two patterns of behavior were noted: successful use of strategies to aid comprehension of the text and independent use of the strategies. The results of this study suggest that comprehension strategy instruction is beneficial for first grade students of all reading abilities, but there was no control or comparison group so improved comprehension may have been the result of factors other than the explicit comprehension strategies instruction students received.

Not all research reports positive gains in comprehension abilities of first grade students following comprehension strategies instruction. Fuchs and Fuchs (2005) showed positive results in word recognition, decoding, and fluency of first grade students following the implementation of Peer-Assisted Learning Strategies (PALS). PALS is a peer-mediated instructional program, which has demonstrated prior success at the second to sixth grade levels (Fuchs & Fuchs, 1998; Fuchs, Fuchs, & Burish, 2000; Fuchs, et. al, 1997). However, the study conducted by these researchers in 2005 failed to find increases in first graders' comprehension skills as a result of PALS.

In their year-long study involving 30 first grade classroom teachers, Fuchs and Fuchs (2005) randomly assigned teachers to one of three conditions: control (regular classroom instruction), PALS alone (no comprehension instruction component), or PALS with comprehension instruction. PALS alone targeted letter sounds, sight word identification, word decoding, and fluency reading rates.

Fuchs and Fuchs (2005) described PALS peer-mediated comprehension instruction for first grade students as having three components: 1) activating prior knowledge and making predictions, 2) Think Time to encourage students to think about the importance of the text, and 3) Story Shrinking where the student was asked to summarize the story. These three activities were first used in listening comprehension activities, which involved watching videos and, later, in listening to teacher read alouds and, after several months, were used in reading comprehension activities as students began reading the text independently. Initially, teachers questioned individual students and then progressed to questioning student pairs. Finally, student pairs questioned each other. Questioning during the activating of prior knowledge and making predictions

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activity included asking questions about the book cover and illustrations in an effort to activate student thinking and to set a listening or reading purpose. Think Time encouraged students to create a mental movie, which corresponded to what they were hearing or reading. Teachers stopped a minimum of two times during the reading to ask these four questions: 1) Who's the movie/story about now? , 2) Where are they?, 3) What's happening?, 4) What might happen next? Story Shrinking required students to provide a story summary, which included at least two story features such as story setting, characters, plot, or outcome.

Fuchs and Fuchs (2005) assessed the 385 students using Word Attack and Word Identification subtests of the Woodcock Reading Mastery Tests, Wechsler Individual Achievement Test-Spelling, and the Comprehensive Reading Assessment Battery. The results indicated that the PALS alone (without comprehension instruction) group performed significantly higher on word-level skill assessments than did the PALS with comprehension instruction or the regular classroom instruction groups. Moreover, the comprehension outcome failed to suggest any value for the PALS with comprehension instruction.

Fuchs and Fuchs (2005) concluded, "First graders who received instruction in word-reading skill outperformed those participating in both word-reading and comprehension activities because, we believe, the activities designed to strengthen comprehension inadvertently interrupted reading practice" (p. 42). The researchers further stated that word- and text-reading practice may be more important to first graders' reading development than comprehension instruction. However, the researchers acknowledge "the possibility remains that comprehension strategy instruction at first

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grade, using better designed interventions or more sensitive measures of comprehension, may yet prove beneficial" (p. 42).

Conclusion

During the past 30 years, researchers have added extensively to the knowledge base concerning reading comprehension. Verbal protocol studies have determined that proficient readers share common reading behaviors and rely on certain cognitive strategies when reading text. Thus, proficient readers actively construct meaning as they intentionally interact with text while reading. The identification of the strategies used by these skillful readers resulted in additional research designed to examine the effect of comprehension strategies instruction on comprehension ability. Research has determined that students can be taught to effectively use comprehension strategies to increase reading comprehension. In addition, research has determined that multiple strategies can be taught together, which leads to acquisition of the strategies and reading comprehension improvement.

Comprehension strategies instruction helps the reader become metacognitively aware of the cognitive processes involved in reading. This awareness aids the reader in self-monitoring of comprehension. Equipping the reader with effective reading comprehension strategies that can be purposively enacted when comprehension becomes difficult, leads to improved comprehension as determined by research. In order to accomplish this goal, typical strategies instruction begins with a teacher modeling the use of comprehension strategies. The reader then practices using those strategies under the teacher's guidance until the reader gradually internalizes the process.

Research has definitively reported causal links between comprehension strategies instruction and improved reading comprehension in students above second grade (NICHHD, 2000). However, there is a paucity of information related to comprehension strategies instruction with younger students. In fact, no causal links have been established between comprehension strategies instruction and improved reading comprehension in first grade beginning readers. Therefore, this experimental study was needed to explore the potential for such causal relationships.

This literature review provided a greater understanding of the higher-order processes of skilled reading, as well as the evolution of comprehension strategies instruction informed by research. It is quite clear that more research is needed to determine the effectiveness of comprehension strategies instruction in first grade students. This review provided the basis for the design and implementation for this research endeavor.

III. METHODS AND PROCEDURES

Chapters one and two provided a theoretical framework for this study, stated the research problem, purpose of the research, the research hypotheses, limitations, and assumptions of this study. Chapter two presented a review of related research and literature that addressed the identification of reading comprehension strategies used by proficient readers, theoretical foundations of comprehension strategies instruction, and results of instruction aimed at increasing reading comprehension by delivering reading comprehension strategies instruction. This chapter describes the experimental design, methods, and procedures used in this study and includes a description of the collection and analysis of data. Specific topics included in this chapter are as follows:

1.   Sources of data

2.   Instrumentation

3.   Data collection procedures

4.   Data analysis procedures

Sources of Data

The participants for this study were students in the first grade who had completed mid-year testing of the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) and achieved benchmark status on measures of nonsense word fluency (NWF) and oral

reading fluency (DORF). These selection criteria helped to ensure that students had the necessary fluency and decoding ability to read and comprehend first grade level text.

All participating students were enrolled in Lakewood Elementary School, a part of the Phenix City School system. The Phenix City School System consists of six elementary schools serving students in kindergarten through fourth grade, one intermediate school serving students in fifth and sixth grades, one junior high school serving students in seventh and eighth grades, and one high school serving students in ninth through twelfth grades. Phenix City is an urban community with a population of approximately 29,088 and is located in south central Alabama.

Lakewood Elementary School serves kindergarten through fourth grade students in north Phenix City, Alabama. The families' socioeconomic status determined whether or not students qualified for free or subsidized lunch programs. At Lakewood Elementary School, 20% of students qualified for free or reduced price lunches. The total population of Lakewood Elementary School during the 2005—2006 school year was 513. The total population of first grade students at Lakewood Elementary School during the 2005—2006 school year was 111. 78 students were eligible to participate in this study; 41 were males and 37 were females.

Thirty-six students in the first grade were randomly chosen from a pool of 48 students who met the selection restrictions and whose parents signed and returned informed consent forms indicating their willingness for their child to participate in the study. The students, ranging in age from six years to eight years, were identified by DIBELS assessments as being capable decoders and able to read a minimum of 20 words per minute when reading first grade level connected text. The students were from six

first grade classrooms at Lakewood Elementary School. Two students later left the study, which meant that 34 students completed the study. 21 males and 13 females participated in this study. There were 26 white and 8 black participants.

The students received concurrent classroom instruction, which included small group reading instruction guided by basal reading materials produced by a major text book publisher.

<div align="center">Instrumentation</div>

Dynamic Indicators of Basic Early Literacy Skills (DIBELS)

The Dynamic Indicators of Basic Early Literacy Skills (DIBELS) are a series of standardized individual assessments that are designed to evaluate emergent and early readers' progress in phonemic awareness, phonics, vocabulary, fluency, and comprehension (DIBELS, 2000-2006). DIBELS are administered to every public school first grade student in Alabama.

DIBELS nonsense word fluency (NWF) measure is an assessment of the student's mastery of the alphabetic principle, which includes letter-sound correspondence and the ability to blend letter sounds into words. Students are shown pseudo words, all of which contain typical short vowel patterns, and are given one minute to read words by giving the sound of each letter individually or by blending the sounds together to read the word. In order to reach benchmark status at midyear of first grade, the student must produce 50 phonemes in one minute. Correlation coefficients for the predictive validity of the DIBELS NWF measure range from .67 to .77 for first grade students (DIBELS, 2002). The correlation coefficient for the alternate form reliability of the DIBELS NWF measure ranges from .67 to .88 with a median coefficient of .83 (DIBELS, 2002).

DIBELS oral reading fluency (DORF) measure is a standardized set of reading passages and administration procedures. Students are given one minute to read a passage. The administrator scores hesitations of more than three seconds, omitted words, and word substitutions as errors. The number of correctly read words is calculated as the student's oral reading rate score. Students read three passages and the median score is recorded as the final DORF score. To achieve benchmark status at midyear of first grade, students must correctly read a minimum of 20 words per minute. Correlation coefficients for the concurrent validity of the DIBELS ORF ranged from .91 to .96 (DIBELS, 2002). Correlation coefficients for the alternate form reliability of DIBELS ORF ranged from .89 to .96 (DIBELS, 2002).

The DIBELS midyear scores for nonsense word fluency (NWF) and oral reading fluency (ORF) were used to determine which students were on grade level in their reading ability. Students not reaching the DIBELS benchmark levels were either non-readers or exhibited decoding deficiencies that impeded their ability to comprehend written text.

Degrees of Reading Power

The Degrees of Reading Power (DRP) are a series of standardized, criterion-referenced reading comprehension assessments for grades 1 through 12+ with an expected reliability of $r = .95$ (Koslin, Zeno, & Koslin, 1987). Typical correlations of DRP tests with other reading comprehension tests are between .75 and .80 (TASA, 2000). A multiple choice cloze format is used in a wide topic variety of nonfiction passages. Parallel test forms J0 and K0 are of equal difficulty and are recommended for spring testing of first grade students. In this study, form J0 was used as a pretest and was

administered on the first day of the study. Form K0 was administered as a posttest on the 20th and final session. This study required two packages each of Form J0 and Form K0, scoring keys for each form and test administration handbooks.

<center>Data Collection Procedures</center>

The researcher obtained written consent from the superintendent of Phenix City School System in Phenix City, Alabama granting permission to collect data for this study. In addition, the researcher secured written permission for participation from parents or guardians of each participating student. The researcher sent informed consent letters home with each of the 78 first grade students who had achieved benchmark status on the mid-year DIBELS assessments of nonsense word fluency and oral reading fluency, which were administered in January, 2006. Parents or guardians were asked to return the signed form as an indication of their willingness for their child to participate in the study. Each signed form was assigned a number indicating the numerical order in which it was received by the researcher. A total of 48 signed forms were returned. The numbers 1 through 48 were entered in a random number generator, and the list of randomly generated numbers was printed. The first 18 numbers on the randomized list were assigned to the treatment group and the next 18 numbers on the randomized list were assigned to the control group. The researcher returned to the numbered forms to determine the identities of the randomly chosen participants. Each of the six first grade classrooms at Lakewood Elementary had students randomly chosen for the study. Classroom teachers were notified about the students who were randomly chosen and given the dates, times, and location of the sessions for students in the two groups.

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Pretest

The researcher administered the Degrees of Reading Power (DRP) Form J0 during the first of 20 sessions with all participants in the study in order to identify each student's reading comprehension level. The researcher administered the DRP in an available classroom not in use at Lakewood Elementary School. The pretest was administered separately to each group on the same date. Students were given as much time as they needed to complete the assessment.

Posttest

The researcher administered the Degrees of Reading Power (DRP) Form K0 on the day following the final read-aloud session in order to identify each student's reading comprehension level. The researcher administered the DRP in an available classroom not in use at Lakewood Elementary School. The posttest was administered separately to each group on the same date. Students were given as much time as they needed to complete the assessment.

Setting of the study

Each of the 18 read-aloud sessions took place in the researcher's classroom at Lakewood Elementary School. Each session lasted 45 minutes. The 20 sessions consisting of one pretest session, 18 read-aloud sessions, and one posttest session, began April 7th, 2006 and ended on May 11th, 2006.

Design of the study

This study is a two-group pretest and posttest randomized design (Ary, Jacobs, Razavieh, & Sorensen, 2006). The design may be illustrated as follows:

$$\text{Group}_{\text{treatment}} \ \text{R} \ \text{O} \ \text{X} \ \text{O}$$

$$\text{Group}_{\text{control}} \ \ \text{R} \ \text{O} \ \ \ \ \text{O}$$

where R means random assignment to groups; O means observation, X means

the treatment, and the two lines indicate there are two groups, a treatment group that

received comprehension strategies instruction and a control group that did not. Random

assignment of participants helped to ensure equivalence between the two groups by

controlling for selection bias and effects of individual differences on outcomes.

Treatment group

The researcher delivered comprehension strategy instruction embedded in teacher

read alouds of children's literature for 25 minutes in 18 daily class sessions to the

experimental group. Selected read-aloud books included both fiction and nonfiction

titles. For example, *Mrs. Wishy-Washy* (Cowley, 1988), *William's Doll* (Zolotow, 1972),

and *An Octopus is Amazing* (Lauber, 1990) were used in three of the read-aloud sessions.

A complete reference list for the children's literature used in the study is included in

Appendix C.

The comprehension strategies for instruction in this study were: self-monitoring

of comprehension, using schema to make text-to-self and text-to-text connections, and

drawing inferences. The researcher incorporated the teaching of declarative knowledge,

procedural knowledge, and conditional knowledge (Duffy, 1993; Paris, Lipson, &

Wixson, 1983; Duffy et al, 1987) into the strategies instruction that occurred during read

alouds. Declarative knowledge is explicitly teaching children what the strategy is and

explaining its usefulness. Procedural knowledge is explicitly teaching children how to

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use the strategy. Conditional knowledge is explicitly teaching students when to use the strategy. The researcher used a gradual release of responsibility (Pearson & Gallagher, 1983), which first involved the direct and explicit modeling of strategy use through a teacher think aloud, then gradually allowed students to participate with teacher guidance, and finally encouraged independent student application of comprehension strategies.

The researcher developed scripts for each of the 18 read-aloud sessions. The scripts varied in detail from complete scripts for explicit modeling of teacher think alouds to title and author of the read-aloud book information only, depending on the stage of gradual release of responsibility. A partial sample script from the fourth session follows:

Today you'll learn about another way to use your schema when you read. I'm going to think aloud while reading this book, *Mrs. Wishy-Washy*, to you. When you see me look up into the air like this, you'll know that I'm letting that "little voice" that's usually only inside my head to be outside so you can hear it. Then you'll hear what a good reader does. So your job is to watch and listen closely. Watch for how I use my schema to do something different. It's called "making a text-to-self connection." I'll be looking for times that the words in the book remind me of something that has happened to me. Ready?

(Stopping place for think-aloud #1) Oh wow! When I read the words "Oh lovely mud! And he rolled in it!" It made me think of when I was a little girl. There was this empty clay lot next door and sometimes I would come across these wonderful mud holes. The surface was different and inviting---shiny and slick with cracks starting to form on top. I'd step in that mud hole and immediately sink up to my knees in wonderful gushy mud that oozed between my toes and up

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my leg. It felt so deliciously cool on hot summer days. And because I made this connection to the text I can understand that the animals probably loved the coolness and squishiness of that mud. It makes sense to me that they called it "lovely." (After reading) Do you see how the author's words made me think about my own experiences? Do you see how I was able to figure out more about the story just by thinking about my own experiences? The book didn't tell me that Mrs. Wishy-Washy was angry or that she didn't like messy things—my connections helped me to figure that out. And because I made these connections I understand the story better---I understand why the animals behaved like they did. I understand why Mrs. Wishy-Washy behaved like she did. And I'll probably remember this story better because I made those connections to my own experiences. Yes, self-to-text connections help us to understand what we read and to remember what we read. (Dismiss to independent reading) Today when you read, I want you to be metacognitive. Think about your thinking that's going on in your head! Watch for times when you're not understanding what you read and stop to fix it up. BUT today, I also want you to look for text (that's the book)-to-self (that's you!) connections…those times that the book is reminding you of something you've done, seen or heard before. If you make a text-to-self connection, raise your hand and I'll be right over to hear all about it. Remember, I'm looking for those good readers under construction to share with the group— those readers that are learning to watch for when they don't understand something and stop to fix it up and those readers who are thinking about how the text reminds them of something that has happened to them—a text-to-self connection.

Additional scripts for each session are included in Appendix D. Lessons were delivered to the whole group with group members using strategies to construct meaning together.

Following each read-aloud session, each of the 18 students was directed to read a different classroom library selection independently and each was encouraged to apply comprehension strategies during this 15-minute independent reading time. Students self-selected independent reading selections from a collection of books at the appropriate reading level. The researcher circulated among the group members during this time, listening to students sharing comprehension strategy use and identifying students to share their thinking with the whole group.

Independent reading was followed by a 5-minute whole group sharing time. Two students briefly shared how they applied comprehension strategies to their independent reading that day and how the use of comprehension strategies improved their comprehension of that particular text. Students were asked to use the following sharing frame to help articulate their thoughts: *When the author said* (the words in the text), *it made me think of* (the text-to-self connection) *and that helped me to understand the story better because* (how comprehension was improved).

Control group

The researcher read the same literature that was read to the treatment group to the control group for 25 minutes in 18 daily class sessions without the use of comprehension strategy instruction. Instead of comprehension strategy instruction, students were encouraged to discuss the story content at will, a process referred to as *student-directed discussion*. A partial sample script follows:

Today we're going to read this story—*An Octopus is Amazing* by Patricia Lauber.

Doesn't the cover look interesting? Does anyone have anything they would like

to share with the group about the cover of this book?

(Read and stop before turning each page. Allow student discussion as it arises. If

none arises, prompt with: Does anyone have anything they'd like to share with

the group about what we've read? Allow student discussion to continue at the end

of the book. If there is no discussion, prompt with: So what did you think about

this book?).

Following each read-aloud session, each of the eighteen students was directed to

read a different selection independently during a 15-minute independent reading time. A

sample dismissal script was:

Each day after we finish our book together, you will read a book by yourself.

Choose any book from your browsing bag to read. If you read a book that you

would like to tell the group about, please raise your hand and I'll be over to talk

with you. I'll be looking for people to share with the group each day. These will

be people who are building a good list of books to enjoy.

Students self-selected independent reading selections from a collection of books

at the appropriate reading level. Independent reading was followed by a 5-minute whole

group sharing time. The researcher circulated among the group during this time, listening

to students read and talking with students about whether or not they were enjoying the

book. These interactions led to the researcher selecting two group members to share their

thinking with the whole group. Two students shared whether or not they would

recommend the book they had read that day to other group members and their reasons why or why not they would do so. Additional scripts can be found in Appendix E.

<div align="center">Data Analysis Procedures</div>

Statistical analyses were based on three null hypotheses listed in Chapter 1 and below. The alpha level was set at .05. Paired sample *t* tests were computed for the treatment group and the control group in order to test the first two null hypotheses. The first null hypothesis was

H_{01}: There is no statistically significant difference in the

pre- and posttest scores on the DRP of first grade students

who receive comprehension strategy instruction embedded

in teacher read alouds.

The second null hypothesis was

H_{02}: There is no statistically significant difference between

pre- and posttest scores on the DRP of first grade students

who participate in student-directed literature discussions of

teacher read alouds.

The third null hypothesis was tested using an independent samples *t* test procedure on the differences in mean gain scores for the treatment group and the control group. The alpha level was set at .05. The third null hypothesis was

H_{03}: There is no statistically significant difference between

mean gain scores for first grade students who have

received comprehension strategy instruction through

the teacher read aloud and those who did not receive

comprehension strategy instruction through the teacher

read aloud.

Summary

Thirty-four first grade students from an urban community in south central Alabama were randomly assigned to a treatment group that received comprehension strategy instruction or to a control group that participated in student-directed literature discussions rather than receiving comprehension strategy instruction. The researcher administered the Degrees of Reading Power (DRP) Form J0 comprehension assessment prior to beginning read-aloud sessions. The researcher conducted 18 read-aloud sessions with the treatment and control groups. On the day following the final read-aloud session, the researcher administered the Degrees of Reading Power (DRP) Form K0 comprehension assessment. Paired sample *t* tests were computed for the treatment group and the control group to test the null hypotheses of no significant difference in pre- and posttest scores within each group. An independent samples *t* test was computed using gain scores of all participants to test the null hypothesis of no significant difference in comprehension gains between the two groups.

IV. RESULTS OF ANALYSIS OF DATA

The first three chapters of this study presented an introduction to the research problem, a description of the purpose and significance of this study, a review of research and literature related to comprehension strategies used by proficient readers, and the methods and procedures used to collect and analyze the data used in this study. This chapter reports the analysis of the data. Quantitative data were collected to test the hypotheses and respond to the research questions.

Demographic data related to participants' gender and ethnicity were collected. Table 1 displays demographic data by gender and ethnicity.

Table 1

Frequency and Percentage of Participants by Gender and Ethnicity (N=34)

	Frequency (*n*)	Percentage
Gender		
Female	13	38.2
Male	21	61.8
Ethnicity		
Black	8	23.5
White	26	76.5

Descriptive data for the treatment and control groups are displayed in Table 2. As displayed in the table, the mean score for both groups was virtually the same on the pretest, whereas the mean score differences on the posttest were greater for the treatment group than the control group. Table 2 displays the pre- and posttest mean scores, pre- and posttest standard deviations, and the pre- and posttest minimum and maximum values for the treatment group and control group.

Table 2

Descriptive Statistics for Pre- and Posttest Scores for Treatment and Control Groups (N=34)

	Mean		SD		Minimum		Maximum	
	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest	Pretest	Posttest
Treatment	64.47	74.35	12.156	11.968	44	54	85	99
Control	64.24	67.65	11.497	11.742	33	46	80	85

Degrees of Reading Power (DRP) pretest scores ranged from 15 to 45 and grade equivalent pretest scores ranged from 1.2 to 4.2 for the treatment group. Posttest DRP scores for the treatment group ranged from 22 to 45 and grade equivalent scores ranged from 2.0 to 4.2. DRP pretest scores ranged from 15 to 41 and grade equivalent pretest scores ranged from 1.2 to 3.7 for the control group. Posttest DRP scores for the control group ranged from 17 to 41 and grade equivalent scores ranged from 1.5 to 3.7. Table 3 displays pre- and posttest DRP scores and grade equivalent scores for the treatment group and control group.

Table 3

Pre- and Posttest DRP Scores and Correlating Grade Equivalency Scores for Treatment and Control Group (N=34)

	DRP Pretest	Grade Equivalent	DRP Posttest	Grade Equivalent
Treatment	15	1.2	22	2.0
	19	1.7	33	2.9
	21	1.9	26	2.3
	23	2.1	26	2.3
	23	2.1	33	2.9
	24	2.2	41	3.7
	26	2.3	31`	2.7
	26	2.3	41	3.7
	28	2.5	33	2.9
	31	2.7	41	3.7
	33	2.9	41	3.7
	35	3.1	50	4.9
	35	3.1	35	3.1
	38	3.4	35	3.1
	41	3.7	58	6.6
	45	4.2	45	4.2

(table continues)

Table 3 (continued)

	DRP Pretest	Grade Equivalent	DRP Posttest	Grade Equivalent
Treatment	45	4.2	41	3.7
Control	15	1.2	17	1.5
	21	1.9	21	1.9
	21	1.9	21	1.9
	23	2.1	24	2.2
	28	2.5	35	3.1
	28	2.5	26	2.3
	28	2.5	26	2.3
	31	2.7	35	3.1
	31	2.7	31	2.7
	31	2.7	33	2.9
	31	2.7	38	3.4
	33	2.9	31	2.7
	33	2.9	38	3.4
	38	3.4	45	4.2
	38	3.4	45	4.2
	41	3.7	41	3.7
	41	3.7	41	3.7

Hypotheses one and two were tested at the .05 level of significance using the paired samples t test. The first null hypothesis tested whether there were differences between the pre- and posttest scores for participants in the treatment group. The first null hypotheses was

      H_{01}: There is no statistically significant difference in pre- and posttest scores on the DRP of first grade students who receive comprehension strategy instruction embedded in teacher read alouds.

The mean score on the pretest was 64.47 and the mean score on the posttest was 74.35. The difference between the pretest and posttest scores for the treatment group was statistically significant at the $p = < 0.00$ level [$t(16) = 4.486$, $p = <0.00$]. This means that one can say with a strong degree of confidence (95%) that the higher posttest scores were due to the treatment (read-aloud strategies instruction) rather than to chance. Participants gained almost 10 points over the pretest. Therefore, the first null hypothesis was rejected.

The second null hypothesis tested whether there were significant differences between the pre- and posttest for the control group. The second null hypothesis was

      H_{02}: There is no statistically significant difference in pre- and posttest scores on the DRP of first grade students who participate in student-directed literature discussions of teacher read alouds.

The mean score on the pretest was 64.24 and the mean score on the posttest was 67.65. The difference between the pretest and posttest scores for the control group was

statistically significant at the $p = 0.016$ level [$t (16) = 2.701$, $p = 0.016$]. This means that one can say with a strong degree of confidence (95%) that the higher posttest scores were due to student-directed literature discussions or to other variables such as gaining proficiency as readers through practice and regular classroom instruction or maturing cognitively. Participants gained almost three and one-half points over the pretest. Therefore, the second null hypothesis was rejected.

The third null hypothesis tested whether there were significant differences in gain scores for reading comprehension between the treatment and control group. The third null hypothesis was

H_{O3}: There is no statistically significant difference in mean gain scores for first grade students who have received comprehension strategy instruction through the teacher read aloud and those who did not receive comprehension strategy instruction through the teacher read aloud.

Gain scores were computed by subtracting participants' pretest score from their respective posttest score. A positive score indicates that the posttest score was higher than the pretest score, and a negative score indicates that the posttest score was lower than the pretest score for a particular individual. Descriptive statistics for gain scores are reported in Table 3 by score, frequency, and percent. As displayed in Table 4, the mean gain score was 6.65, the standard deviation was 7.996, the minimum gain score was -5, the maximum gain score was 23, and the range was 28. Five participants had negative gain scores and seven participants had a gain score of zero.

Table 4

Descriptive Statistics for Gain Scores for Treatment and Control Groups (N = 34)

	Gain Score	Frequency	Percent	Gain Score	Frequency	Percent
Treatment	-5	1	5.9	11	1	5.9
	-4	1	5.9	14	2	11.8
	0	2	11.8	19	2	11.8
	4	1	5.9	21	1	5.9
	6	1	5.9	22	1	5.9
	7	2	11.8	23	1	5.9
	10	1	5.9			
Control	-3	3	17.6	6	1	5.9
	0	5	29.4	9	2	11.8
	2	1	5.9	10	2	11.8
	3	1	5.9	13	1	5.9
	5	1	5.9			

Mean gain scores, standard deviation, and minimum and maximum scores for both groups are reported in table 5.

Table 5

Mean gain score, standard deviation, minimum and maximum score for the control group and treatment group (N = 34)

	Mean	SD	Minimum Score	Maximum Score
Treatment Group	9.88	9.082	-5	23
Control Group	3.41	5.209	-3	13

An independent samples *t* test statistical procedure was performed on the mean gain scores to test the null hypothesis of no difference in gain scores between the treatment and control groups. The mean gain score for the control group was 3.41, and the mean gain score for the treatment group was 9.88. Results of the analysis were statistically significant ($t = 2.548$, $p = .017$). Therefore, the null hypothesis of no difference between the groups was rejected. The Levene's statistic was used to test for differences in variance between the two groups. The Levene's test indicated that the variance was not equal between the two groups (treatment group variance = 82.48; control group variance = 27.13). However, the *t* test is robust to violations of the assumption of homogeneity of variance. It should also be noted that the *t* value reported here ($t = 2.548$) was identical for equal and unequal variances, which indicates the variance did not affect the outcome of the *t* test.

V. SUMMARY, DISCUSSION, AND RECOMMENDATIONS

The first four chapters of this study presented the research problem statement, a description of the purpose and significance of the study, a review of research and literature related to comprehension strategy instruction, the methods and procedures used to collect and analyze the data used in this study, and the statistical analysis of the data. This chapter presents a summary of the study, summary of results, discussion of findings and recommendations.

Summary of the Study

The purpose of this study was to determine if intentional comprehension strategy instruction delivered through teacher read alouds, produced greater comprehension for first graders than teacher read alouds that included no comprehension strategy instruction and featured student-directed literature discussions of the text instead. Specifically, this study was designed to determine whether or not there were statistically significant differences in pre- and posttest scores of students who received comprehension strategies instruction embedded in teacher read alouds, statistically significant differences in pre- and posttest scores of students who participated in student-directed literature discussions of teacher read alouds, and statistically significant differences between gain scores for students who received comprehension strategy instruction through the teacher read aloud

and those who participated in student-directed literature discussions of teacher read alouds.

Thirty-four first grade students participated in this study. The participants were enrolled in six first grade classrooms in Lakewood Elementary School (Phenix City School System) in East-Central Alabama. Permission to conduct this research was obtained from the superintendent of the Phenix City School System, and the parents or guardians of each student participant.

Seventeen students were randomly assigned to the treatment group, receiving comprehension strategy instruction through teacher read alouds and seventeen students were randomly assigned to the control group, participating in student-directed literature discussions of teacher read alouds. There were a total of 18 read-aloud sessions with an additional two sessions for administering a pretest and posttest comprehension assessment of participants in both groups. Each of the 18 sessions was 45 minutes in duration, which consisted of 25 minutes designated for a teacher read aloud, 15 minutes designated for independent reading of appropriately leveled books, and five minutes whole group sharing time.

Research instruments used in this study included the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) nonsense word fluency (NWF) and oral reading fluency (DORF) subtests, and the Degrees of Reading Power (DRP) forms J0 and K0, developed by Touchstone Applied Science Associates (TASA). Only those students identified as being capable decoders of first-grade-level text by their DIBELS benchmark scores on tests of nonsense word fluency and oral reading fluency were invited to participate in this study. This requirement controlled factors such as deficient decoding abilities and

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insufficient reading speed that might have prevented students from comprehending the text they read and responded to on the DRP forms used as pre- and posttests.

Summary of Results

Three research questions and three null hypotheses guided this investigation. The first null hypothesis was formulated to determine whether or not statistically significant differences existed between the pre- and posttest comprehension assessment scores for participants in the treatment group. The paired samples t test indicated that there was a statistically significant difference in the mean scores of the pre- and posttest at the .000 level. The posttest mean score for students receiving comprehension strategy instruction was significantly higher than the pretest mean score for these same students. Results of this finding indicate that first graders receiving comprehension instruction embedded in teacher read alouds improve significantly in reading comprehension.

The second null hypothesis was formulated to determine whether or not statistically significant differences existed between the pre- and posttest comprehension assessment scores for participants in the control group. The paired samples t test indicated that there was a statistically significant difference in the mean scores of the pre- and posttest at the .016 level. The posttest mean score for students participating in student-directed literature discussions of teacher read alouds was significantly higher than the pretest mean score for these same students. Results of this finding indicate that first graders participating in student-directed literature discussions of teacher read alouds also improve significantly in reading comprehension.

The third null hypothesis was to test if there were significant differences in gain scores for reading comprehension between the treatment and control group. The

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independent samples *t* test performed on the mean gain scores indicated that there was a statistically significant difference between the two groups. Students receiving comprehension strategy instruction made significantly greater gains in reading comprehension than students who participated in student-led literature discussions of teacher read alouds. Results of this finding indicate that first graders who receive comprehension strategy instruction embedded in teacher read alouds are able to comprehend more effectively than students who do not receive comprehension strategy instruction.

<div align="center">Discussion of Findings and Recommendations</div>

Research conducted in the last two decades has determined that comprehension strategy instruction is beneficial for students in second grade and above (Brown, et al, 1996; Eilers & Pinkley, 2006; Pressley, 2002; Stahl, 2004). This study found that comprehension strategy instruction is also beneficial for first grade students. The students were able to apply what they learned about comprehension strategies in a whole group read-aloud context to their own independent reading. Students' independent applications of comprehension strategies taught to the treatment group were evident. One student explained how his text-to-self connection helped him predict what would happen next in the story he was reading when he stated, "I can figure out what's gonna happen 'cause it's kinda like when I did it." Another child shared his own awareness of an inference he made, "He said that 'I'm now sitting on this bike' and it made me think that…the author didn't tell me…but I'm thinking that he's scared." Phrases like "I can…", "…the author didn't tell me…", and "I thought about…" were often used by the students in the treatment group, and the use of these words reflects the empowerment of

the child as a reader. As a result of these types of strategic thinking about text, participants who received comprehension strategies instruction achieved scores on a standardized measure of reading comprehension that were significantly higher than comprehension scores for their peers without comprehension strategies instruction. These results were somewhat surprising, considering the short duration of the study. However, the findings of this study should encourage first grade teachers to confidently use comprehension strategy instruction embedded in read alouds in their own classrooms as a method for effectively teaching thinking processes that are necessary for skillful reading.

This study also provides a general instructional framework for explicit comprehension instruction delivered through teacher read alouds to first grade students. In planning for comprehension strategies instruction, the classroom teacher will first identify strategies to be taught and select texts that are particularly conducive for modeling the featured strategies. The beginning read-aloud sessions feature the teacher modeling the use of targeted strategies through think alouds. During these sessions, the teacher explicitly names each strategy, models when and how to use each strategy, and explains how each strategy helps the reader to better comprehend. Once the teacher has explicitly modeled the comprehension strategies use through think-aloud sessions, the students begin to share their own use of the strategies during subsequent whole group read-aloud sessions. Students are provided a reading time to read appropriately leveled books each day and are encouraged to experiment with independent strategy use. Finally, the teacher provides a whole group sharing time for the specific purpose of encouraging students to share their use of strategies in independent reading. Students are encouraged to articulate not only how they use the strategy, but how it helps them comprehend more

deeply and permanently. A verbal sharing frame provides a scaffold for these early sharing opportunities. The verbal sharing frame used in this study for schema connections follows: When the author said (the child reads the specific words in the text), it made me think of (the child shares the schema connection) and that helps me understand the story better because (the child shares how comprehension was helped). These sharing sessions encourage students to independently apply comprehension strategies to their own reading. In addition, the teacher is provided with opportunities to assess students' understanding and personal use of comprehension strategies, as well as opportunities to clarify and refine the independent use of those comprehension strategies. It should also be noted that sharing sessions provide comprehension strategies mini lessons for the other students who are listening during sharing time.

While the findings of this study emphatically support inclusion of comprehension strategy instruction embedded in teacher read alouds with first grade students, the limitations listed in the next section should be noted.

Limitations of the Study

1. This study only included first graders living in Phenix City, Alabama; therefore, the reported results are not generalizable to the first grade beginning reader population as a whole.

2. Participants in this study were limited to on-grade-level and above ability students; therefore the results are not generalizable to struggling readers.

3. Only first grade students participated in this study, so the effectiveness of comprehension strategy instruction embedded in teacher read alouds cannot be assumed for students in other grade levels.

4. The sample size of 34 students was small. A larger, more diverse group of students would allow more generalization of the results.

5. The researcher delivered the comprehension instruction to the treatment group after an extensive self-study of comprehension strategy instruction. Teachers who are new to the concept of comprehension strategies instruction may not experience the same results found in this study.

Need for Further Research

1. This study examined comprehension strategy instruction that targeted self-monitoring of comprehension, using schema to make text-to-self and text-to-text connections, and inferring. Future studies are needed to determine other strategies that can be effectively taught through the teacher read alouds to first grade students.

2. This study was designed to simulate read-aloud times that naturally occur in first grade classrooms by delivering comprehension strategy instruction in a whole group format to 17 first graders. Future studies are needed to determine whether whole group read alouds or small group read alouds are more effective with this type of instruction generally, and in particular, if struggling readers may benefit more from small group than whole group read alouds for teaching comprehension strategies.

3. This study only included proficient decoders and fluent first-grade-level readers in order to prevent comprehension interferences caused by lack of accuracy and automaticity. However, most first grade classrooms consist of readers who are on-grade-level or above and struggling readers. Further investigations are needed to determine whether or not comprehension strategy instruction embedded in read alouds positively impacts struggling first grade readers.

4. Comprehension strategies were taught in 18 sessions during this study. It is possible that students who are taught comprehension strategies during an entire school year might become even more proficient readers. An investigation to determine the amount of comprehension strategy instruction that is most effective for first grade students is warranted.

5. Participants in this study were limited to first graders. It is possible that kindergarten students may benefit from comprehension strategy instruction embedded in teacher read alouds. Further studies examining the effectiveness of such instruction will add to the current knowledge base in the field of reading education.

6. The researcher's preparation to deliver the comprehension strategy instruction to the treatment group included five years of professional reading, collaboration with other educators, and self-analysis with regards to comprehension instruction. Future studies are needed to determine the amount and type of professional development needed to produce teachers who can effectively incorporate comprehension strategies instruction and practice into shared and guided reading as well as read alouds.

Educational Implications and Recommendation

Results of this study indicate that comprehension strategy instruction can be effectively delivered to first grade students when embedded in teacher read alouds. Furthermore, first-graders are capable of applying the strategies learned in a listening context to their independent reading. Use of these strategies was found to have a positive impact on reading comprehension ability. The findings of this study provide evidence to support initiatives by first grade teachers to include comprehension strategy instruction in the classroom curriculum during daily read aloud times.

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APPENDIX A

LETTER FROM SUPERINTENDENT OF

PHENIX CITY SCHOOL SYSTEM

GRANTING PERMISSION TO

CONDUCT RESEARCH

Office Of Superintendent

Telephone (334) 298-0534

1212 Ninth Avenue

Fax (334) 298-2674

June 10, 2005

Office of Human Subjects Research
Auburn University
307 Samford Hall
Auburn University, AL 36849

To Whom It May Concern:

Please accept this letter as our official commitment to cooperate with Mrs. Sharon Elder who is a teacher in the Phenix City School System and is currently pursuing a Doctorate Degree from Auburn University. We will assist her in gathering data and information needed to conduct the research in keeping with proper research protocol. Mrs. Elder's plan is to collect data from Lakewood Elementary School, specifically, the first grade.

If you have any questions or concerns, or need additional information, please feel free to call me at 334-298-0534.

Sincerely,

Larry E. DiChiara, Ed. D.
Superintendent

APPENDIX B

INFORMED CONSENT LETTER TO PARTICIPATE IN

RESEARCH TO PARENTS/GUARDIANS OF

PROSPECTIVE STUDENT PARTICIPANTS

Auburn University

Auburn University, Alabama 36849-5212

Curriculum and Teaching
College of Education
5040 Haley Center

Telephone: (334) 844-4434
FAX: (334) 844-6789

INFORMED CONSENT
FOR
Comprehension Strategy Instruction with Teacher Read-Alouds for First Graders

Your child is invited to participate in a research study to determine the effectiveness of comprehension strategy instruction embedded in teacher read-alouds for first grade students. This study is being conducted by Mrs. Sharon Elder, Reading Coach, under the supervision of Dr. Edna Brabham, Associate Professor in the College of Education and the Department of Curriculum and Teaching at Auburn University. We hope to determine the effectiveness of teaching first graders to use strategies designed to increase reading comprehension. Your child was selected as a possible candidate because he or she is currently a first grade student and is currently an on-grade-level reader as determined by the Dynamic Indicators of Basic Early Literacy Skills (DIBELS) mid-year assessments.

If you decide to allow your child to participate, I will meet with your child in a small group in my classroom at Lakewood Elementary School, 45 minutes daily for a period of 20 days. Each child will be asked if he or she would like to participate in the study and advised that he or she may stop participating at any time during the study if desired. On the first day, I will assess each participant's reading comprehension with Degrees of Reading Power comprehension assessment. This assessment will be given in my classroom with no other adults present. Participants will be randomly assigned to either a treatment group or a control group. Beginning the second day, I will read a literature selection to each group. The treatment group will also receive comprehension strategies instruction, which will include teacher modeling and guided student discussion centered on the use of comprehension strategies to increase comprehension. The control group will not receive the comprehension strategies instruction, but will be encouraged to participate in student-directed discussion pertaining to the literature content. "Student-directed discussion" is a term used to describe student discussion of the story content at will. Students in both groups will independently read appropriately leveled text for the final 15 minutes of each session. I will again assess each student's reading comprehension ability on the 20th day of the study by Degrees of Reading Power comprehension assessment. This assessment will be given in my classroom with no other adults present.

Parent's Initials _____

HUMAN SUBJECTS
OFFICE OF RESEARCH
PROJECT #05-225 MR 0511
APPROVED 11/11/05 TO 11/10/06

A LAND-GRANT UNIVERSITY

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Auburn University

Auburn University, Alabama 36849-5212

Curriculum and Teaching
College of Education
5040 Haley Center

Telephone (334) 844-4434
FAX: (334) 844-6789

It is possible that your child may feel uncomfortable when out of the classroom with a less familiar teacher. I will encourage parents and teachers to prepare students for the study by talking about the special time they will have to enjoy great books with the researcher. In addition, I will make frequent classroom visits prior to the beginning of the study to help the students become more familiar with me as a teacher. Your child may worry that he or she is being pulled out of the classroom because of poor performance. The classroom teacher and I will assure each child that he or she is not being pulled from the classroom for remediation and I encourage you to do the same. You may be concerned that your child will miss valuable classroom instruction. I will pull the students from the classroom during their own teacher read-aloud or during independent reading time so as not to interfere with classroom instruction.

Each of the sessions will be equitable to the classroom experiences your child will be missing since the study will be conducted during classroom read-aloud time and classroom independent reading time. All participants will experience a daily teacher read-aloud. Reading aloud to children greatly enhances their literate environment by modeling reading behaviors, increasing vocabulary, familiarity of written language, and knowledge of the world, and motivating children to read independently. In addition, those children randomly assigned to the experimental group will receive comprehension strategy instruction. It is possible that these children will become active, involved, and strategic readers. As a parent of a participant, you will receive a report showing how your child scored compared to the group and the study.

Any information obtained in connection with this study and that can be identified with you or your child will remain confidential. Each participating student will be given a numerical code, which will be used as identifying information. Coding information will ensure confidentiality of students' scores on assessment measures yet will allow the researcher to compare scores on assessment measures. Information collected through your child's participation may be used for dissertation research, submitted for publication, and/or serve as a basis for conference presentations and professional meetings. If so, none of your or your child's identifiable information will be included.

Data will be retained three years from the conclusion of the study. The data will then be shredded and disposed of during normal trash collection. You may withdraw your child from participation at any time, without penalty, and you may also withdraw any identifiable data which has been collected about your child.

Parent's Initials _____

HUMAN SUBJECTS
OFFICE OF RESEARCH
PROJECT #05-225 MR 051.
APPROVED 11/11/05 TO 11/10/06

Auburn University

Auburn University, Alabama 36849-5212

Curriculum and Teaching
College of Education
5040 Haley Center

Telephone: (334) 844-4434
FAX: (334) 844-6789

Your decision whether or not to allow your child to participate will not jeopardize your future relations with Auburn University or Lakewood Elementary School.

If you have any questions, I invite you to ask them now. If you have questions later, you may contact Mrs. Sharon Elder at (334)732-1173 or (334)297-4855 or by e-mail at selder@pcboc.net. You may also contact Dr. Edna Brabham at (334) 844-6793 or e-mail at brabhed@auburn.edu. We will be happy to answer your questions. You will be provided a copy of this form to keep.

For more information regarding your rights as a research participant you may contact the Auburn University Office of Human Subjects Research or the Institutional Review Board by phone (334)844-5966 or e-mail at hsubjec@auburn.edu or IRBChair@auburn.edu.

HAVING READ THE INFORMATION PROVIDED, YOU MUST DECIDE WHETHER OR NOT YOU WISH TO PARTICIPATE IN THIS RESEARCH STUDY. YOUR SIGNATURE INDICATES YOUR WILLINGNESS TO ALLOW YOUR CHILD TO PARTICIPATE.

_____

Child's Name (Please print)

_____

Parent/Guardian Name (Please print)   Date

_____

Parent/Guardian Signature   Date

_____

Investigator's Name (Please print)   Date

_____

Investigator's Signature   Date

HUMAN SUBJECTS
OFFICE OF RESEARCH
PROJECT # 05·225 MR 0511
APPROVED 11/11/65 TO 11/10/06

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APPENDIX C

REFERENCE LIST FOR

CHILDREN'S LITERATURE

USED IN STUDY

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APPENDIX D

SAMPLE SCRIPTS

USED WITH

TREATMENT GROUP

AND CONTROL GROUP

SESSION 1

Both groups: Pretest DRP Form JO

SESSION 2

Treatment Group:

Whole group (25 minutes): Explain that each person hears two voices: the voice that is spoken out loud and a voice inside their head that no one else hears but them. Have each person practice listening to the voice inside their head by asking them to say "Hello" out loud and then say "Hello" inside their head without verbalizing aloud.

Discuss term "metacognition". Explain *metacognition* as *thinking about your thinking*. Pretend to sit an "invisible little me" on my shoulder to "catch" me being metacognitive. This "invisible little me" will be listening for my discussion that I will be having in my head as I read. Explain that I will stop and *think aloud* when the "invisible little me" catches me being metacognitive so that they can hear what a good reader does. Explain that their job is to listen and watch closely for good readers do.

Think-aloud with *An Octopus is Amazing* by Patricia Lauber. Model distracting internal voice as follows.

Model fix up strategy (page 8):

(misread "had" for "hard") *Huh? ...and is had to see? That doesn't make sense. Good readers stop the very second that something doesn't make sense and fix it. Let me look at that sentence again...oh...HARD not HAD. Ok...that fixed it.*

Model comprehension difficulty due to little schema (page 14): *Hmmmm...this part is getting hard to understand. I'm going to do what good readers do when the reading is*

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hard to understand—I'm going to slow down my reading to make sure I get all the important information.

Model distracting internal voice (page 20): Ut oh. I just listened for that "little me" voice inside my head. I was reading the words in the book but that little voice inside my head was thinking about what I was going to cook for supper tonight. Hmmm…I don't have a clue what I just read. I'd better stop and fix it up…good readers often go back and reread when they discover that they were thinking about something that wasn't about the book.

After reading: Set down the book, look out at the group and say, *"See how I talk to myself as I read? I don't just read word after word after word without pausing to think and have a discussion with myself. I did it out loud so you could hear what my discussions sound like inside my brain. I am being metacognitive. What did you notice that I did while I read?"*

Discussion of important points:

Good readers are always thinking about what's going on inside their head.

Good readers watch for problems that come up in their reading and they stop to fix it up.

Dismiss to independent reading time:

Each day after we finish our work together, you will read a book by yourself. Choose any book from your browsing bag to read. I want you to be metacognitive from now on so when you read, listen to that little voice inside your head that only you can hear. Your neighbor won't hear it—only you will hear it because it's your own thoughts. Listen and make sure that you thinking about the book you're reading. If the reading gets hard— like if something doesn't make sense, then you know what good readers do. Right?

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That's what I want you to do. If you catch yourself being metacognitive and you want to tell me about it, raise your hand and I'll be right over. I'll be looking to see who's a good reader under construction—someone who's building good reading habits. Each day we'll pick a couple of people to share something with the group that they tried out as a good reader tool.

Independent reading (15 minutes):

Instructor will circulate making appropriate comments such as:

Look at you! You asked for help in figuring out this word. You didn't just skip the word and forget about it. You thought about not knowing the word and thought about what to do about it. Then you decided to ask for help. You were being metacognitive.

Whole group share time (5 minutes):

This will feature one or two students who were metacognitive and who used fix up strategies during independent reading.

SESSION 2

Control Group:

Whole group (25 minutes) *Today we're going to read this story—An Octopus is Amazing by Patricia Lauber. Doesn't the cover look interesting? Does anyone have anything they would like to share with the group about the cover of this book?*

Read and stop before turning each page. Allow student discussion as it arises. If none arises, prompt with: *Does anyone have anything they'd like to share with the group about what we've read?*

Allow student discussion to continue at the end of the book. If there is no discussion, prompt with: *So what did you think about this book?*

Dismiss to independent reading time: *Each day after we finish our book together, you will read a book by yourself. Choose any book from your browsing bag to read. If you read a book that you would like to tell the group about, please raise your hand and I'll be over to talk with you. I'll be looking for one or two people to share with the group each day. These will be people who are building a good list of books to enjoy.*

Independent reading (15 minutes)

Whole group share time (5 minutes):

This will feature one or two students who asked to share about their books that they read that day.

*This basic script will be used each day with different books (see titles in Appendix D and in the scripts for treatment group sessions) until Day 20 when posttests will be given.

SESSION 3

Treatment Group

Whole group (25 minutes): Review "good reader" points from yesterday: *Yesterday I showed you what good readers do while they read. Who can tell me what we learned?*

Review two main points: Good readers are always thinking about what's going on inside their head.

Good readers watch for problems that come up in their reading and they stop to fix it up.

Today we're going to learn about "schema." Schema is everything that you already know. Good readers always think about their schema—what they already know about something—before they read. Let me show you what I mean.

How many of you have ever seen a filing cabinet? What's inside that filing cabinet? Right…inside my filing cabinet you will find files like this one. (show file folder) *See how I have written on the tab what's inside this file? This one has "Ocean" written on it. Every time I find something interesting about the ocean—maybe a book title or an activity we could do at school—I put it in this file folder. Then when it's time to study oceans, I just pull out my file folder and choose the ideas I want to use. Well, our brain is kind of like that filing cabinet back there. Inside we have all kinds of information that we're keeping there—kind of like these file folders. Everything that we've got "filed" in our brain is called our "schema."*

So what do good readers do with schema? Well, before a good reader ever starts reading—when he first picks up the book—he starts thinking, "Hmmm…what do I already know about this before I start reading." That's called "activating" your schema.

That just means like when your mom cranks up the car…she activates it. So you just activate—or crank up your schema.

Let's do it together. Here's a book—Tarantula by Monica Harris. Hmmm…this book is probably going to give me a lot of information about tarantulas. I can tell because the picture on the cover is a real photograph instead of a storybook drawing. So…let's do what good readers do. Let's activate our schema. What's your schema for tarantulas? I'm going to write down the important words you say on these sticky notes and put it inside our schema file. That will remind us that all of this is our schema—what we think we already know about tarantulas—and it's already filed in our brains like the files in the filing cabinet we talked about.

Discussion. Instructor will write down each contribution on a sticky note and stick it to the inside of the schema file.

Ok. Now we've activated our schema. We're thinking about what we already know about tarantulas. When we start reading, we'll be looking for information in the book that confirms—that just means it says you're right—or rejects—that means the information in the book says you were wrong—our schema. So if you hear me read something that confirms (thumbs up) *or rejects* (thumbs down)*, remember it so we can fix our schema. If our schema is right, we'll leave it right inside the folder. If our schema is wrong, we'll have to take it out of the folder and change it. And if you learn something brand new about tarantulas, we can make another sticky note to add to our folder. Ready?*

Read.

So…let's look at our schema again and decide what stays, what changes, and what we have to get rid of altogether.

Discuss items.

Dismiss to independent reading: *Today before you ever start reading, I want you to pick up the book you'll read and ask yourself, "So what's my schema for this book." Activate your schema. Then as you read, be metacognitive. Think about your schema and think about what you might need to change or what you keep or what you add to that pretend file folder in your brain. I'll be looking for those good readers under construction— those readers who are being metacognitive—they're thinking about how their schema is right, wrong, or what might be new schema. If I find those good readers under construction, I'll ask them to share what they did with the group.*

Independent reading (15 minutes)

Whole group share time (5 minutes): This will feature one or two students who can share about how their schema was confirmed, changed, or added.

SESSION 4

Treatment Group

Whole group (25 minutes): *So far, we've learned that good readers do two important things.   Good readers are metacognitive—they think about what they're thinking! Remember when I read An Octopus is Amazing? I stopped when something didn't make sense. I fixed it up. I stopped when I realized that I wasn't thinking about what I was reading. I fixed it up. Good readers are metacognitive. They watch to make sure that they understand what they're reading and when they catch themselves not understanding, they don't just read on—they stop and fix it up!*

Good readers also use their schema—they think about what they already know about something before they even start to read. Remember how we did that with <u>Tarantula</u>? We thought about what we already knew about tarantulas. Some of our schema—the information that was filed in our brain—was right. Some of it was wrong and we had to change our schema. And we even added some schema when we learned something new. Good readers use their schema!

Today you'll learn about another way to use your schema when you read. I'm going to think aloud while reading this book, Mrs. Wishy-Washy, to you. When you see me look up into the air like this, you'll know that I'm letting that "little voice" that's usually only inside my head to be outside so you can hear it. Then you'll hear what a good reader does. So your job is to watch and listen closely. Watch for how I use my schema to do something different. It's called "making a text-to-self connection." I'll be looking for times that the words in the book remind me of something that has happened to me. Ready?

Stopping place for think-aloud #1: *Oh wow! When I read the words "Oh lovely mud! And he rolled in it!" It made me think of when I was a little girl. There was this empty clay lot next door and sometimes I would come across these wonderful mud holes. The surface was different and inviting---shiny and slick with cracks starting to form on top. I'd step in that mud hole and immediately sink up to my knees in wonderful gushy mud that oozed between my toes and up my leg. It felt so deliciously cool on hot summer days. And because I made this connection to the text I can understand that the animals probably loved the coolness and squishiness of that mud. It makes sense to me that they called it "lovely."*

Stopping place for think-aloud #2: *Oh, oh, oh! Look at this! When Mrs. Wishy-Washy said, "Just look at you! In the tub you go!" It made me think back again to when I was that little girl who had just had so much fun playing in the mud hole. When I finally climbed out, I'd head for home and Momma (who somehow always saw me coming) would rush outside and proceed to "chew me out" for playing in mud. Then she'd grab the hosepipe and spray me down. The tone of her voice was angry…and I knew that she liked to keep things neat and tidy so I understood why she was mad. She sprayed that water hard on my legs and it stung. I remember hating that part. Now…because I've made these text-to-self connections, I can understand that Mrs. Wishy-Washy probably likes to keep things neat and clean, too—just like Momma. And she probably got a little angry with those animals for getting so messy—just like Momma. And maybe—because she was angry, she scrubbed a little too hard when she was getting them clean and the animals didn't like that—just like Momma and me.*

After reading: *Do you see how the author's words made me think about my own experiences? Do you see how I was able to figure out more about the story just by thinking about my own experiences? The book didn't tell me that Mrs. Wishy-Washy was angry or that she didn't like messy things—my connections helped me to figure that out. And because I made these connections I understand the story better---I understand why the animals behaved like they did. I understand why Mrs. Wishy-Washy behaved like she did. And I'll probably remember this story better because I made those connections to my own experiences. Yes, self-to-text connections help us to understand what we read and to remember what we read.*

Dismiss to independent reading: *Today when you read, I want you to be metacognitive. Think about your thinking that's going on in your head! Watch for times that you're not understanding what you read and stop to fix it up. BUT today, I also want you to look for text (that's the book)-to-self (that's you!) connections…those times that the book is reminding you of something you've done, seen or heard before. If you make a text-to-self connection, raise your hand and I'll be right over to hear all about it. Remember, I'm looking for those good readers under construction to share with the group—those readers that are learning to watch for when they don't understand something and stop to fix it up AND those readers who are thinking about how the text reminds them of something that has happened to them—a text-to-self connection.*

Independent reading (15 minutes)

Whole group share time (5 minutes): This will feature one or two students who can share text-to-self connections they made. The students will use a "sharing frame": *When the author said* (the words in the text), *it made me think of* (the text-to-self connection) *and*

that helped me to understand the story better because <u>(how comprehension was</u>

<u>improved)</u>.

SESSION 5

Treatment Group

Whole group (25 minutes): *What have we learned that good readers do?* Discuss.

Ok...today I'll read a book by one of my favorite authors, Cynthia Rylant. This book is titled Henry and Mudge: The First Adventure. Look at the cover and think about the title. Do you have any schema for this book already? Discuss. *Great job. You were doing what good readers do—activating your schema. Now as you listen to the story, be metacognitive—think about your thinking! If something I read doesn't make sense, what could you do?* Discuss. *Try to make text-to-self connections while I read. If the book reminds you of anything that you've ever done, seen, or heard, share it with us. Let's think about how that will help you understand the story better. I'll share some things, too.* Read book.

Dismiss to independent reading: *Today when you read, I want you to watch for times that you're not understanding what you're reading and stop to fix it up. But I also want you to look for text-to-self connections as you read. If the words in the book make you think about something you've done, seen, or heard before, you've made a text-to-self connection! I want you to raise your hand so that I come right over and hear all about it. Remember that I will be looking for good readers under construction—those readers that think about what they're reading, making sure that it all makes sense to them and make text-to-self connections.* I'll ask one or two of you to share with the group when I see that you're building good reading habits!

Independent reading (15 minutes)

Whole group share time (5 minutes): This will feature one or two students who can share text-to-self connections they have made and fix-up strategies they used when comprehension broke down. The students will use the sharing frame from the last session.

*This basic script will be followed for the treatment group for the next three sessions.

SESSION 6

She Come Bringing Me That Little Baby Girl

Eloise Greenfield

SESSION 7

Amazing Grace

Mary Hoffman

SESSION 8

Now One Foot, Now the Other

Tomie dePaola

SESSION 9

Treatment group

Whole group (25 minutes): *What have we learned that good readers do?* Discuss.

Today I want to show you another way that good readers connect the text to their schema. When the text reminds you of something else you've read before, we call that a text-to-text connection. So good readers look for ways that the text reminds them of themselves (text-to-self connection) and they look for ways that the text reminds them of something else they're read before (text-to-text connection). Let me show you what I mean. Your job today will be to watch and listen closely as I do a think-aloud. Remember—I'll be letting that thinking that goes on inside my head come outside so you can hear what a good reader does.

Read *The Frog Prince Continued* by Jon Scieszka.

(page 1): *Hmmm…this reminds me of a fairy tale I've read before, but I'm a little confused. Those are the words that usually come at the end of the fairy tale not the beginning. I'm a little confused, but I'm going to read on and see if it clears up with the next part I read.*

(page 2): *Oh…I get it! So this is a story about what happened after the ending of the fairy tale I read…kind of like telling the rest of the story. Ut oh—they're not happy together anymore.*

(page 9): *Oh, oh, oh! When I read this part: "…a beautiful princess to kiss and wake up", it made me think of another book I've read—Sleeping Beauty. There was a witch in that story, too. I'll bet that this is the witch from that story.*

(page 10): *Aha! It's another witch from yet another fairy tale—Snow White. And because I know that the witch in Snow White gave her a poisoned apple, I think that he'd better not eat that apple—it's probably poison!*

(page 14): *A witch in a gingerbread house? Oh, I think I read another book that had this witch in it—Hansel and Gretel! No wonder she was licking her lips when she met the prince—I know that she wanted to eat Hansel and Gretel so she probably wanted to eat the prince, too!*

(page 17): *Oh---when I read this part: …I'm on my way to see a girl in the village about going to a ball…, it made me think Cinderella. I know that the fairy godmother in that story turned mice into horses, maybe she's going to turn the prince into a horse by mistake.*

(page 18): *Carriage? Oh yeah—like the fairy godmother in Cinderella turned the pumpkin into a carriage.*

Finish book.

After reading: *Did you see what I did? I thought about how this text (story) reminded me of other texts (stories) that I've read before. And because I made those text-to-text connections, I understood the story better. It's like I got the joke—the funny part! Did you see me guess what would happen next before I read because of my text-to-text connections? Did you see how I could understand who each of those witches were because of my text-to-text connections? Did you see how I understood what each witch was going to do and why the prince ran away because of my connections? Good readers make text-to-self connections when they read and they make text-to-text connections when they read. It helps them to understand and remember the story better.*

Dismiss to independent reading: *Today when you read, I want you to be metacognitive. Think about your thinking that's going on in your head! Watch for times that you're not understanding what you read and stop to fix it up. Today, I also want you to look for text-to-self connections…those times that the book is reminding you of something you've done, seen or heard before. And, I want you to watch for text-to-text connections…those times that what you're reading reminds you of something you've read before.   If you make a text-to-text connection, raise your hand and I'll be right over to hear all about it. Remember, I'm looking for those good readers under construction to share with the group—those readers that are learning to watch for when they don't understand something and stop to fix it up AND those readers who are thinking about how the text reminds them of something that has happened to them—a text-to-self connection or how the text reminds them of something they're read before—a text-to-text connection.*

Independent reading (15 minutes)

Whole group share time (5 minutes): This will feature one or two students who can share text-to-text connections they made. The students will use a "sharing frame": *When the author said* (the words in the text), *it made me think of* (the text-to-text connection) *and that helped me to understand the story better because* (how comprehension was improved).

SESSION 10

Treatment Group

Whole group (25 minutes): *What have we learned that good readers do?* Discuss.

Today's book is by Cynthia Rylant—Henry and Mudge in Puddle Trouble.   You know

what good readers do, don't you? So show me. What are you thinking right now? Do

you have any schema for this book? Discuss. *Great job. You were doing what good*

readers do—activating your schema by making text-to-text connections. Now as you

listen to the story, be metacognitive—think about your thinking! If something I read

doesn't make sense, what will you do? Discuss. *Try to make text-to-text connections*

while I read. If the book reminds you of anything that we've read before, share it with us.

Let's think about how that will help you understand the story better. I'll share some

things, too. Read book.

Dismiss to independent reading: *All right good readers under construction—it's time for*

you to try making all of these great schema connections. Be looking for how the book

you read today reminds you of yourself or another book you've read. It will help you to

understand and to remember the story better. You should also be checking yourself to

make sure you're understanding the book you're reading as you read it. If you find that

you're not understanding some part, remember to stop and fix it up.

Independent reading (15 minutes)

Whole group share time (5 minutes): This will feature one or two students who can share

text-to-text and text-to-self connections they have made and fix-up strategies they used

when comprehension broke down. The students will use the sharing frame from the last

session.

*This basic script will be followed for the treatment group for session 11.

<div align="center">SESSION 11</div>

William's Doll

Charlotte Zolotow

SESSION 12

Treatment Group

Whole group (25 minutes): *What do good readers do?* Discuss. Important points: 1.
Good readers activate their schema before reading. 2. Good readers also use their
schema to make text-to-self and text-to-text connections that help them to understand the
story better and to better remember the story. 3. Good readers are always aware of
whether or not they are understanding what they are reading. 4. Good readers stop and
fix up their reading when they are not understanding.

We've learned that good readers make those text-to-self and text-to-text connections

when they read. We've learned that it helps us to remember the story better. We've

learned that it helps us to figure out what's going on in the story when we make those

connections—sometimes we were even able to predict (guess) what would happen next in

a story because of our connections. Those connections can help us to figure out things

that the author doesn't tell us in the text. When you use what you already know by

putting it together with something written in the text to figure out more than the author

told you, it's called inferring. Let me show you what I mean. I'll be doing a think-aloud

with this book by Eve Bunting, Trouble on the T-Ball Team. You know what that

means…listen and watch carefully as I make the thinking that's inside my brain come

outside so that you can see what a good reader does. Ready?

Before reading: *Hmmm…Trouble on the T-Ball Team. Well…what can I infer just from*

the words in the title? I know that T-Ball is a game that young kids around five or six

years old play. It's kind of like softball. A team—there must be a group of five- or six-

year olds. Trouble—so there's a problem that their team Is having. I know that teams

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can have problems getting along with each other or teams can have problems losing

games. I'm going to predict that these kids are losing all their games. I'm inferring that

because of what I know how important winning is to sports teams and because of the

picture clues—they're looking kind of sad.

During reading: (page 7): *Well…it's not games that they're losing, but they are losing*

things. What kind of things might a team of 6-year-olds lose? I've watched t-ball before

lots of times so I can think about what things they might all have—bats, balls, caps. Hey,

my son used to play flag football when he was six. I remember that he lost his helmet a

few times. That text-to-self connection I just made makes me think that they're losing

their caps.

 (page 9): *How can you lose something on the way to the game? Hmmmm…I've seen*

things get carried out the window by the wind sometimes when I'm in the car. Could that

be what happened? I don't think I have enough clues from the text to infer that yet. I'll

read on a little further.

(page 11): *I think these are all text clues—it can be lost in a car or when eating. You can*

lose two at the same time. I'm not making any text-to-self or text-to-text connections.

I'm not ready to infer what it could be yet. I'll read on, but I'm going to remember those

clues in the text.

(page 13): *Hmmm…the author said: She grinned at me. "I just lost one."*

I know that when people grin, they're usually happy. So I'm inferring that she's not sad

that she lost whatever she lost.

(page 15): *Aha! Whatever they're losing is small. I can infer that because it fit in her*

aunt's purse.

(page 16): *D.K. is hopping up and down. The coach called for a bathroom break. I know that when I have to go to the bathroom really bad, I squirm around a lot. I'm inferring that the coach called for a bathroom break because he figured out that D.K. can't wait to go to the bathroom!*

(page 19): *The coach lost 20 when he was their age and hasn't lost any since he was 6? What do you lose a lot of when you're six that you don't lose later on? And almost everyone is losing at least one of them. I'm not sure what it is yet, but I'm going to remember those clues and read on.*

(page 20): *So now she wants to lose one? WAIT! I think I can infer what it is! It's something small that six-year-olds lose a lot of but older kids and grown-ups don't lose. It can be lost in lots of places and times. Some kids don't like to lose them and some don't mind. Some even want to lose one. I'm inferring that they're losing teeth! I'm inferring that because I know that at school we have "Lost Tooth" clubs and some kids get excited to lose a tooth, but some kids don't like it when they lose a tooth because it usually bleeds and they think it's gross. I know that most kids lose their baby teeth around 5, 6, or 7. Yes. I infer that they're losing teeth.*

(page 29): *The text says: At last…I've lost one. I open my other hand and look down at it. Yeah! It's a tooth—if she lost it how can she look down at it? She lost a tooth—and that means it just fell out of her mouth. I'm inferring that she's looking at her tooth.* Finish book.

After reading: *Did you see what I did? I took the clues the author gave and put it together with what I already knew to figure out things that the author had not yet told me.*

That's called inferring. Good readers infer when they read. It helps them to "fill in the blanks" if needed—to figure out things the author doesn't tell.

Dismiss to independent reading: *Now what do you think I want you to do when you read today? That's right. I want you to use those text-to-self and text-to-text connections to infer what the author doesn't tell you…it's almost like being a detective. If you're able to infer something, raise your hand to share what you inferred with me. Maybe you'll predict what will happen next in the story. Maybe you'll understand how a character in the story is feeling in the story. Maybe you'll understand why something happens in the story—all because you can put what you already know with what the author says and figure out something new. Remember, I'll be looking for those good readers under construction to share later.*

Independent reading (15 minutes).

Whole group share time (5 minutes): This will feature one or two students who infer while reading, make schema connections, or use fix-up strategies to address comprehension failures.

SESSION 13

Whole group (25 minutes): *What do we know that good readers do? Good readers look for opportunities to make text-to-self and text-to-text connections to enjoy the book more, to remember what they read, and to infer things that the author doesn't say. Good readers are always paying attention to what they think while they read so that they can stop right away and fix up their reading anytime they don't understand a part. Today we're going to read a book by Chris Van Allsburg. It's titled Two Bad Ants. Now—use your schema about ants and the title of the book to make a prediction about what this story will be about.* Share. *Now, as I read the book I want you to be metacognitive. Think about your thinking! If I read something that doesn't make sense to you, what will you do?* Discuss. *I want you to be looking for those chances to make text-to-self and text-to-text connections—those times that the book reminds you of something you've done, seen, heard, or read before. I think if you do that, you're going to be able to infer some things that the author doesn't tell you in this book. Ready?* Read book.

Dismiss to independent reading: *Wonderful job! You're all good readers under construction. You're doing all those things that good readers do when you listen to a book. Now it's time for you to practice doing those things while you read a book. Remember, if you make a text-to-self or text-to-text connection, infer something that the author does not tell you, or stop to fix-up your understanding of the book when it doesn't make sense, raise your hand so that I can come to you and hear all about it. I'll be looking for those good readers under construction to share with the group after our reading time.*

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Independent reading (15 minutes).

Whole group share time (5 minutes): This will feature one or two students who infer while reading, make schema connections, or use fix-up strategies to address comprehension failures.

*This basic script will be followed for the treatment group for session 14.

<div align="center">SESSION 14</div>

The Empty Pot

Demi

SESSION 15

Whole group (25 minutes): *All right, good readers…what do we know to do when we are reading?* Discuss. *You are all becoming such wonderful readers. Today we'll read a book by another favorite author of mine. His name is William Steig. The title of this book is Amos and Boris. Now—look at the cover—use the picture clues, title and your schema to predict what this book may be about.* Share. *Today I'll do another think-aloud. You know what that means, don't you? Your job is to watch and listen closely as I make that thinking that usually only I can hear inside my brain come outside so that you can hear what a good reader does. If you listen carefully, you'll hear me using text-to-self and text-to-text connections by putting them together with clues from the text to figure out some tricky parts. That's right—I'm going to infer my way out of some reading problems!*

During reading: (page 3): *Hmmm—I'm having a hard time understanding this part because I don't know what all the words mean. Mending—hmmm—let me look for clues in the text. "…a needle and thread for the mending of torn sails". Well—I know that when I have torn jeans, I take a needle and thread and sew it up to fix the jeans. The author does say "needle and thread" and the author does say "torn sails." I'm inferring that "mend" means to fix something—in this case, fixing sails with holes in them. And "iodine"—"…such as bandages and iodine, a yo-yo and playing cards." Well—let me look for what the author does say. He says "bandages and iodine" like they go together. I know that when I was a little girl, my mother had a first-aid kit and when I'd get hurt—*

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like a cut—she's put medicine on the cut and then a bandage on top of the medicine so

I'm inferring that iodine is some type of medicine.

(page 8): *Wow! This author surely uses some big words. I'm not sure I understand this*

part—I read the words but I couldn't really say what it meant—"...it evaded his grasp."

Evaded his grasp? Let me look for some things I can connect with. I'll go back and

reread slowly while I look for something to connect with my schema. "...he squeaked as

he grabbed desperately..." Oh—so he's trying to grab something—he's been tossed in

the ocean and he's grabbing for something to hold onto. Then the author says, "But".

Ahhhh...that tells me he was trying to do something BUT—like he couldn't do it. So I'm

inferring that he tried to grab the boat, but he missed it—evaded must mean "missed."

Oh yeah...see here it says, "...and he never saw it again." So he did miss the boat.

(page 25): *Breaded with sand? What does that mean? Let me try to make a connection*

to figure out the meaning of those words. Ok...Boris is on the sandy beach. I've played

on the beach lots of times. Now Boris turns over and over and rolls in the sand. I know

that when I'm at the beach and I turn over in the sand, some of the sand sticks to me.

And I know that sometimes when I cook, I do something called "breading." It just means

that I dip shrimp or chicken or some kind of food into some crumbs—the crumbs stick to

the food and then I fry it and the crumbs make a crust kind of covering. So I can infer

here that it's like Boris has sticky sand covering his wet body—that must be what the

author means by "breaded with sand."

Finish book.

After reading: *Did you see what I did? I was thinking the whole time I was reading and when I didn't understand what I was reading—when it didn't make sense because I didn't know what the words meant—I stopped. Then I tried to make connections to the book so that I could infer what the words meant. I used what the author said and my connections to figure it out. It's like I was a detective—a reading detective!*

Dismiss to independent reading. *Now it's time for the most exciting part of our day. The time that you get to try using all of these good reader behaviors when you read by yourself. We are building such good readers in this room!*

Remember that you can sometimes infer the meaning of a word you don't know if you try to make a connection and use the clues that the author gives you. Today, if you make a text-to-self or text-to-text connection, predict something that will happen in the book, infer something new that the author doesn't tell you, or infer the meaning of a word that you weren't familiar with, I want you to raise your hand so that I can come to you and listen to the wonderful things you are doing. I'll be looking for those good readers under construction to share with the group after our reading time.

Independent reading (15 minutes).

Whole group share time (5 minutes): This will feature one or two students who infer while reading, make schema connections, or use fix-up strategies to address comprehension failures.

SESSION 16

Whole group (25 minutes): *I'm looking at some of the best readers in this school! I know that you are good readers under construction because I hear you doing all the good things that good readers do. What exactly do good readers do?* Discuss. *The title of today's book is Sylvester and the Magic Pebble. It was written by William Steig. So good readers—what are you thinking?* Share. *We know that Amos and Boris was written by William Steig and that book had lots of big words that could trip up someone who didn't know how to fix-up their reading problems by inferring the meaning of unfamiliar words. Let's be on the look-out for opportunities to make text-to-self and text-to-text connections, infer new things that the author doesn't tell us, infer meanings of unfamiliar words, predict what might happen next—all the things that good readers do. Ready?* Read book.

Dismiss to independent reading: *You are making me so proud! You truly are good readers under construction. Today when you read your book, I want you to practice those good reader habits—make sure that you're understanding the book as you read, stop if you find that the text isn't making sense, fix up any parts of your reading that don't make sense, make text-to-self and text-to-text connections, infer new things that the author doesn't tell you, make predictions about what might happen next in the text and then read to see if your prediction was right, and infer the meanings of any words you aren't familiar with. Whew! You've learned so much in such a quick time. Remember, I'll be looking for those good readers under construction to share with the group after our reading time.*

Independent reading (15 minutes).

Whole group share time (5 minutes): This will feature one or two students who infer while reading, make schema connections, or use fix-up strategies to address comprehension failures.

*This basic script will be followed for the treatment group for sessions 17 and 18.

SESSION 17

Doctor DeSoto

William Steig

SESSION 18

The Amazing Bone

William Steig

SESSION 19

Whole group (25 minutes): *Well good readers—today I have the last book that we will enjoy together. The title is Koko's Kitten. It's written by Dr. Francine Patterson. So— you're all good readers now—what are you thinking?* Share. *Remember to do all of the things that good readers do as we enjoy this book and be sure to share with the group all of the good reader thoughts you have as I read. Ready?*

Read book.

Dismiss to independent reading: *Wow! I'm so excited to see the readers that you are becoming. Today when you read I want you to remember to do all the things we've learned about what good readers do—make those predictions, those connections, those inferences, pay special attention to whether or not the book is making sense to you and, if it doesn't—stop and fix it up! I'll be looking, one last time, for those good readers under construction to share with the group after our reading time.*

Independent reading (15 minutes).

Whole group share time (5 minutes): This will feature one or two students who infer while reading, make schema connections, or use fix-up strategies to address comprehension failures.

SESSION 20

Both groups: DRP Posttest Form K0