ABSTRACT

Title of Dissertation: THE EFFECTS OF EXPLICIT INSTRUCTION OF
                           EXPOSITORY TEXT STRUCTURE INCORPORATING
                           GRAPHIC ORGANIZERS ON THE COMPREHENSION
                           OF THIRD-GRADE STUDENTS

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        An important goal of education is to assist students to read and write expository

text. Success in school, work, and society depends largely upon the ability to comprehend

this type of text. However, there is ample research to suggest that many children are not

learning to read and write expository text competently. Researchers noted that

establishing effective instructional frameworks for teaching students how to read and

write this material remains elusive. Therefore, developing effective expository reading

comprehension instruction should be a research priority.

        Using a mixed qualitative and quantitative design, this study examined the effects

of explicit instruction of expository text structure incorporating graphic organizers on the

comprehension of three intervention classrooms of third-grade students in comparison to

one control classroom. Within the three intervention classrooms, the students received the

designed intervention presented by their classroom teacher or teaching assistant during

their small-group instruction. The students in the control classroom received regular

Guided Reading instruction presented by their classroom teacher or teaching assistant.

The instructional framework for the designed intervention included explicit and

scaffolded instruction embedded in an interactive learning environment. This framework

also relied on multiple instructional strategies that appear to positively affect reading comprehension: modeling, thinking aloud, and graphic organizers.

When compared with the control group, at post-testing, students receiving the intervention showed a statistically significant difference in their ability to comprehend expository text. The third-grade students who received explicit instruction incorporating graphic organizers scored significantly better on representing text structure graphically, using graphic organizers to compose a written summary, and accurately summarizing expository text. In addition, the intervention teachers and assistant were able to deliver the designed intervention effectively.

Findings from this study revealed third-grade students can improve their expository text comprehension when given explicit instruction incorporating graphic organizers. Further, this study suggested the importance of creating a collaborative environment with appropriate scaffolded instruction. Outcomes in rhetorical pattern knowledge, graphic organizers, and scaffolded instruction, all support future research concerning pedagogically sound instructional methods for providing expository text instruction to students of all ages.

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OF EXPOSITORY TEXT STRUCTURE
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OF THIRD-GRADE STUDENTS

by

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DEDICATION

To my adorable family

Terry, Aaden, and Abagail Newman, You are my world.

Thank you for your enduring love.

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Even though this was my dissertation, I could not have completed it without the love and

Support from many others.

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CHAPTER ONE

Statement of the Problem

Students of all ages often have difficulty comprehending expository text even though the importance of comprehending expository text in school and success in work and society depends largely upon this ability (Duke, 2004; Durkin, 1993; Spiro & Taylor, 1980). According to the 2005 Reading Report Card, only 31% of fourth and eighth-grade students scored at or above the proficient level (Perie, Grigg, & Donahue, 2005). This finding demonstrates that many students have difficulty finding, understanding, summarizing, and explaining literary experiences and informational pieces. In addition, this finding suggests that many students entering secondary schools do not have the comprehension skills needed to succeed especially with expository text. These findings are discouraging because a dominant feature in content-area instruction and success in higher education is the reliance on expository text to teach the content (Allington & Strange, 1980; Duke, 2000).

Researchers have found differences in how readers comprehend expository text. Good readers use a structure strategy approach, which is their ability to know and use a set of text structure schemata used by authors (Chambliss, 1995; Chambliss & Murphy, 2002; Meyer, 1985; Meyer, Brandt, & Bluth, 1980). Then, good readers construct a mental representation of the important ideas presented in an expository text (Meyer, 1985; Meyer et al., 1980). However, poor readers have difficulty in using a structure strategy approach and appear to use a default list strategy when recalling important ideas from text (Meyer et al., 1980; Meyer & Rice, 1982).

Research has also indicated minimal expository text instruction occurs during the elementary years (Duke, 2000; Durkin, 1978-79; Pressley, Rankin, & Yokoi, 1996). Duke (2000) found that first-grade students spent only 3.6 minutes each day learning from expository text. Pressley et al. (1996) found that elementary school teachers reported using expository text in only 6% of their reading instruction. Further, Durkin (1978-1978) noted that very little reading comprehension instruction occurred even with social studies text.

However, there has been a renewed interest in teaching expository text at the elementary level (Moss, 2004; Yopp & Yopp, 2004), indicating a change in elementary reading instruction to emphasize expository text (Moss & Newton, 2002). Although, establishing effective instructional frameworks for teaching elementary students *how* to read this material remains elusive (Almasi, 2003; Duke, 2000). Not surprisingly, the National Reading Panel (NRP) (2000) and the RAND Reading Study Group (2002) suggested that developing effective expository text comprehension instruction should be a research priority.

In this study, I examined whether expository text instruction improved third-graders' ability to comprehend expository text. Researchers have recommended that expository text instruction should include explicit instruction in order to develop expository text comprehension strategies (Bransford, Brown, & Cocking, 2000; Duke, 2000). In addition, researchers propose that explicit expository reading instruction should occur at the elementary level (Duke, 2004; Duke & Bennett-Armistead, 2003). In fact, Duke (2004) recommended that "we should not wait to address this problem until students reach late elementary, middle, and high school" (p. 40). Elementary teachers

would be able to develop explicit comprehension strategies that would enable their students to read and understand expository text (Duke, 2000; Duke & Pearson, 2002).

The purpose of this study was to investigate the effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of students in three third-grade classrooms in comparison to students in one control classroom. Each third-grade classroom had a 90-minute language arts block during which the students were involved in Shared Reading, Guided Reading, Spelling, English, and Writing. I manipulated 40-minutes of that block. This particular 40-minute block included two, 20-minute small-group instructional sessions called Guided Reading by the school system.

Three intervention classrooms incorporated explicit instruction incorporating graphic organizers into their 40-minute small-group instructional segment to assist third-grade students in comprehending expository texts. Explicit instruction incorporating graphic organizers was an instructional intervention that I developed to assist third-grade students in comprehending expository text. This intervention included scaffolded instruction where the teacher gradually released responsibility to the students. In addition, modeling and thinking aloud were incorporated into the instruction. Further, the designed intervention provided students with knowledge about text structures and corresponding graphic organizers. In addition, the students learned how to use a graphic organizer to write a summary for an expository text.

The control group received regular instruction as developed by this particular elementary school for small group instruction, also called Guided Reading. Fountas and Pinnell (1996, 2001) noted that Guided Reading is a good practice because it enables

teachers to differentiate among learners in a small-group setting, and it allows teachers to find the right book at the right time for each group of learners. In addition, Guided Reading provides an opportunity for the teacher to teach specific comprehension strategies (Pinnell & Fountas, 2003). In this particular school and grade, Guided Reading involved the teacher and students reading and discussing an expository text. After reading and discussing the text, the teacher and assistant chose activities for the students to complete that included decoding, comprehension, vocabulary, and writing exercises. During the intervention period, the control students did not receive instruction using a graphic organizer or writing a summary.

Rationale

A reasonable first step in helping elementary students comprehend expository text is to design appropriate expository text instruction as suggested by research (Armbruster & Armstrong, 1992; Duke, 2004; NRP, 2000; RAND Reading Study Group, 2002). In fact, Duke (2004) recommended that elementary teachers should explicitly teach expository text strategies in order to foster comprehension development.

In this case, the instructional framework for this study included explicit instruction embedded in an interactive learning environment, utilizing the notion of scaffolding to assist young students in comprehending expository text. Research suggests that explicit and scaffolded instruction appear to positively affect reading comprehension (Meyer & Poon, 2001; Palincsar & Brown, 1984; Vygotsky, 1978; Wood, Bruner, & Ross, 1974).

In addition, the designed intervention relied on multiple instructional strategies that appear to positively affect reading comprehension: (a) modeling (Bandura, 1977;

Pearson & Dole, 1987), (b) thinking aloud (Baumann, Seifert-Kessell, & Jones, 1992), and (c) graphic organizers (Chambliss & Calfee, 1998; Griffin & Malone, 1995). The theoretical framework for this study evolved from the notions of how readers comprehend expository text and knowledge of rhetorical patterns.

In the following sections, I begin by discussing how good readers comprehend expository text by applying a structure strategy approach and constructing a mental representation. Second, I discuss how poor readers use a default list strategy when recalling expository text information. Third, I discuss young readers and their use of a structure strategy approach or a default list. Fourth, I present the influence of text design followed by my instructional framework and research supported strategies.

How Good and Poor Readers Comprehend Expository Text

Good Readers

A major theoretical base for this study incorporated how good readers comprehend text (Chambliss, 1995; Chambliss & Calfee, 1998; Meyer, 1985; Meyer et al., 1980). Specifically, how do good readers read and understand expository text?

Structure strategy. Ruddell (1994) noted that the construction of meaning occurs when a reader is able to use a set of comprehension strategies. Within this set of comprehension strategies, Meyer and her colleagues (Meyer et al., 1980; Meyer & Rice, 1984) examined specific strategies that would promote comprehension and memory of text. These researchers developed a comprehension model, which involves the reader using a structure strategy approach.

Structure strategy is the ability of a reader to know and use a set of text structure schemata used by authors to organize the ideas in their texts (Chambliss, 1995;

Chambliss & Murphy, 2002; Meyer, 1985). In processing text using a structure strategy, good readers use their knowledge that authors compose text in predictable ways (Meyer et al., 1980; Meyer & Poon, 2001).

In the first stage of the model, a reader uses cues in the text to identify the structural pattern an author employed in writing the text (Chambliss & Calfee, 1998; Meyer, 1985). Authors cue the pattern using signal words (Meyer et al., 1980), introductions, conclusions, topic sentences, and titles and subtitles (Chambliss, 1995; Chambliss & Calfee, 1998). A reader who can use the cues to recognize the pattern in the text can search for main ideas and important details (Chambliss, 1995). Readers can use their knowledge about text patterns to separate the "wheat from the chaff" (Meyer & Poon, 2001, p. 141).

Mental representation. After identifying the text structure in a text, a good reader constructs a mental representation of the important information (Meyer, 1985). A good reader uses the author's purpose and cues to build a mental representation of the important information presented in the text. Meyer (1985) stated that a reader's mental representation should resemble the author's overall text structure. Good readers will automatically create this mental representation, while poor readers tend to recall a small number of details in a list format (Meyer, 1985).

Researchers have found patterns in adult readers' and older children's recalls suggesting they can construct a mental representation of a text's overall structure (Chambliss, 1995; Goldman, Saul, & Cote, 1995; Meyer, 1985). Meyer et al. (1980) found that good readers at the ninth-grade level could create a mental representation of expository text parallel to the content structure. Chambliss (1995) demonstrated that

competent high school readers could write a summary of an argument using the same structure found in the passage. Readers are successful in constructing a representation similar to that of the author when the information is the same "in the reader and author's structural representations of the text" (Meyer & Rice, 1982, p. 160). Meyer and Freedle (1984) reported that the more organized text structures, which they identified as comparison, causation, and description, tend to promote similarities between a reader's mental representation and the author's overall text structure.

Poor Readers

Default list. Research indicates that poor readers use a default list in recalling expository text (Meyer et al., 1980; Meyer & Rice, 1982). When using a default list strategy, a poor reader tries to remember anything from the text. Thus, a poor reader's recall exhibits no focus or plan, which is critical in the comprehension process. This type of recall is a "list-like collection of descriptions about the passage topic with no attempt to interrelate these descriptions" (Meyer & Rice, 1982, p. 166). Meyer et al. (1980) indicated that about 50% of the ninth-grade participants in their study utilized the default list strategy. These students apparently did not use the cues in the text to identify the author's top-level structure. Consequently, they could not use the author's top-level structure to organize their recalls. The poor readers organized their recalls into collections of lists as expected by the researchers. Furthermore, research indicates that poor readers, when recalling information, will most likely include details of less importance as compared to good readers (Armbruster, Anderson, & Ostertag, 1987).

Young Readers

   Structure strategy. As presented earlier, good readers use a structure strategy approach to comprehend expository text. In order to comprehend this type of text, readers know a set of text structure schemata utilized by authors (Chambliss, 1995; Chambliss & Murphy, 2002; Meyer, 1985) and readers expect authors to compose text in predictable ways (Meyer et al., 1980; Meyer & Poon, 2001). However, what does the research reveal about young readers utilizing a structure strategy approach?

   Richgels, McGee, Lomax, and Sheard (1987) demonstrated that fourth -and sixth-grade students are able to organize their recalls and compositions based on text structure schemata. In a study conducted by Taylor (1982), fifth-grade students were able to generate summaries similar to the health textbook's structure. Taylor's finding indicated that fifth-grade students could use a structure strategy approach in their organization of expository text ideas. In addition, Chambliss and Murphy (2002) found some fourth and fifth-grade students to represent the overall structure in texts within an argument structure. These students apparently used structure strategy to assist with their representations.

   Default list. Even though some young readers use a structure strategy approach in comprehending expository text, most children do not know, or are unaware, of such text structure schemata. In this case, researchers have found children to rely on a default list to recall information similar to poor adult readers described earlier (Chambliss & Murphy, 2002; Cote, Goldman, & Saul, 1998; Kucan & Beck, 1996; McGee, 1982).

   In using a think aloud protocol, Kucan and Beck (1996) noted that fourth-graders recalled expository text with no overall structure. Chambliss and Murphy (2002) found

that a group of fourth -and fifth-graders represented an argument text similar to the default list found in other research (Meyer et al., 1980; McGee, 1982). In addition, Cote et al. (1998) noted that fourth- and sixth-grade readers recalled expository information by focusing exclusively on sentence level relationships. This research suggests that many readers do not display a formal text structure in their recalls of expository text.

In conclusion, this section contrasted how good and poor readers comprehend text. Good readers comprehend text by using the structure strategy approach (Meyer, 1985), and creating a mental representation that matches the structure in the text (Meyer, 1985; Meyer et al., 1980). Poor readers tend to rely on a default list strategy, which is recalling details in a list-like fashion with no focus or plan (Meyer & Rice, 1982). Some young readers can comprehend text by using a structure strategy approach (Chambliss & Murphy, 2002; Richgels et al., 1987). However, many young children are not aware of different text structures and use a list like strategy to recall information (Chambliss & Murphy, 2002).

The Influence of Text Design

Good readers can use a structure strategy approach to comprehend expository text, but only if the text adheres to one of the canonical patterns that they know (Meyer et al., 1980; Meyer & Rice, 1984). The design of the text makes a difference (Chambliss & Calfee, 1998). According to Chambliss and Calfee (1998), text design either facilitates or inhibits text comprehension. The following section presents the textual framework for my study and summarizes research that suggests the relationship between the structure strategy and a well-designed text.

Design Framework

One framework for analyzing text design developed largely from research conducted by Meyer (1975). Meyer introduced the notion of a hierarchical structure and examined how it influenced reader comprehension. Meyer's (1975, 1985) text analysis begins with the top-level structure, which is the overall organization of a text. Meyer (1975) classified five different top-level structures: collection, cause and effect, problem and solution, comparison, and description. Underneath the top-level structure reside the propositions, which represent the sentences in the text (Meyer, 1985). Meyer's hierarchical analysis was the first systematic approach to representing the structure in an expository text.

Because Meyer's (1975) propositional analysis works best for short passages and not for longer texts (Chambliss & Calfee, 1998), my proposed intervention developed largely from Calfee and Chambliss' (1987) analysis for understanding rhetorical patterns in expository text. In their 1987 work, Calfee and Chambliss surveyed the most popular freshman composition books from a traditional rhetorical viewpoint. Calfee and Chambliss (1987) initially identified three common rhetorical patterns across the composition books surveyed: description, sequence, and argument. Their subsequent analysis of typical school texts led Chambliss and Calfee (1998) to modify this taxonomy according to the author's purpose. An author may choose to inform, argue, or explain a topic to an audience. The Calfee and Chambliss (1987; Chambliss & Calfee, 1998) analysis used graphic organizers to represent the paragraphs and sections in a text according to a small number of rhetorical patterns they identified. Their analysis is different from Meyer's (1975) approach where Meyer analyzed text based upon

propositions and constructing hierarchies. Appendix A presents the basic graphic

organizers identified and applied in this study based on the Chambliss and Calfee (1998)

model.

The work of Calfee and Chambliss is pedagogically useful because it is very

analogous to the types of expository patterns found in students' everyday classroom

reading (Chambliss & Calfee, 1998). Furthermore, this analysis not only represents

school texts well, but several of the patterns are identical to graphic organizers that

elementary students are taught to use in school for other purposes. Thus, the rationale for

including Calfee and Chambliss (1987; Chambliss & Calfee, 1998) analysis for my study

involved three purposes. First, their analysis allowed me to identify the overall rhetorical

pattern within each expository text used in the study. Second, the analysis became an

important aspect of the designed instruction. This instruction included third-grade

students learning how to identify various rhetorical patterns of expository texts they had

just read. In addition, third-grade students learned how to construct a graphic organizer

for each text, which identified with the text's rhetorical pattern. Finally, their analysis

allowed me to develop a scoring rubric for the students' summaries and graphic

organizers in order to look at the students' understanding of rhetorical patterns.

Bringing the Structure Strategy and Text Design Together

What allows the comprehension of one expository text to be easy and another text

to be hard? The answer lies with how closely the text matches a common rhetorical

pattern. A well-designed text enhances comprehension by allowing readers to utilize a

structure strategy approach. Meyer and Freedle (1984) researched the learning and

memory ability of students reading different rhetorical patterns. Meyer and Freedle

(1984) concluded that the more organized a text pattern the more efficient a reader can be at comprehending the information.

Based on the Calfee and Chambliss (1987) framework for text analysis, Chambliss (1995) researched how competent high school readers comprehend a lengthy argument. Chambliss found that text design, which contained a well-structured rhetorical pattern, was extremely important in aiding competent readers to recall lengthy arguments. However, it is unclear from research conducted so far that young readers in first, second or third-grades can use a structure strategy approach to comprehend a particular rhetorical pattern. Richgels et al. (1987) found fourth -and sixth-grade students to recall information according to the rhetorical pattern in the text. Chambliss and Murphy (2002) found that fourth-graders could use the structure strategy approach, but they seemed to know only one rhetorical pattern that they used with whatever they were reading. Other research found fourth-grade students who recalled text as if there were no overall rhetorical pattern (Englert & Hiebert, 1984; Kucan & Beck, 1996).

Research with students younger than fourth-grade suggests that some students can comprehend expository text based on knowledge about one particular rhetorical pattern. In one such study, Danner (1976) found second-grade students to recall more superordinate ideas and overall content with a topically arranged text than from scrambled texts. In conclusion, these findings suggest that fourth-grade students and younger should receive more exposure and instruction with various expository text rhetorical patterns in order to improve their comprehension and memory of this type of text. In this study, I developed instruction that assisted third-grade students to

comprehend expository text based on knowledge about three rhetorical patterns:

descriptive, sequential, and explanation.

Instructional Framework

Prior to 1970, reading comprehension was viewed as a passive, teacher-dominated

learning process (Durkin, 1978-79, NRP, 2000). This process included the teacher and

students reading a text, followed by a question and answer session, with little or no

instruction on how to apply comprehension strategies (Bos & Vaughn, 1998; Moody,

Vaughn, Hughes, & Fischer, 2000; Pressley, Wharton-MacDonald, Mistretta-Hampston,

& Echevarria, 1998; Taylor, Pearson, Clark, & Walpole, 2000). However, over the past

three decades, reading comprehension has been guided by the new science of learning,

cognitive research (Bransford et al., 2000; NRP, 2000).

According to a cognitive perspective, reading is viewed as an active process

(Pressley & Afflerbach, 1995). Reading is active in the sense that a "reader reads a text to

understand what is read, to construct memory representations of what is understood, and

to put this understanding to use" (NRP, 2000, p. 4-39). Thus, the focus of this new

science of learning is on learning for understanding (Bransford et al., 2000). By applying

a cognitive conceptualization of reading, education is beginning to improve instruction

where students can become active learners. If this is so, what type of learning and

instruction are best suited in assisting young readers in comprehending expository text?

Interactive Learning Environment

Currently, there is a renewed interest in creating a interactive learning

environment. An interactive learning environment provides students with "opportunities

to actively and substantively engage in an exchange of ideas that results in the co-

construction of meaning" (Gambrell, Mazzoni, & Almasi, 2000, p. 120). This renewed interest is in response to Vygotsky's (1978) theory about social interaction and learning. Vygotsky suggested that social environments provide the appropriate atmosphere for students to learn higher levels of cognitive processing. In order for students to learn the higher-level skills, a cognitive shift in learning and instruction must occur.

Vygotsky (1978) concluded that learning and instruction were typically lagging behind a student's emerging cognitive processes, and felt that instruction should lead a student's cognitive development. Vygotsky referred to this type of instruction as working in a student's "zone of proximal development." This zone would "awaken a variety of developmental processes that are able to operate only when the child is interacting with people in his environment and in collaboration with his peers" (Vygotsky, 1978, p. 90). In essence, the zone of proximal development is the distance between what the child could learn unaided and what the child could learn with assistance from a more knowledgeable other, whether teacher or peer. The vital aspect of Vygotsky's theory is attributed to the social context surrounding a student's learning experience.

Accordingly, research has shown that an interactive learning environment can influence a student's cognitive development in literary acts (Almasi, 1995; Almasi, O'Flahavan, & Arya, 2001; Palincsar & Brown, 1984). Palincsar and Brown's (1984) reciprocal teaching design increased seventh-grade students' application of reading strategies by including a great deal of teacher and student interaction. This type of social setting enabled seventh-grade students to negotiate their understanding of text. For the purposes of this study, I have applied the Vygotskian idea of zone of proximal

development to an interactive learning environment in order to enhance expository text comprehension for third-grade students.

Explicit Instruction

In order to design effective reading comprehension that develops cognitive strategies, researchers should incorporate explicit instruction (Bransford et al., 2000; Duke & Bennett-Armistead, 2003). Explicit instruction provides students with "a reasonable challenge, a chance to take an additional step in their zones of proximal development." (Palincsar & Brown, 1984, p. 156). In this study, explicit instruction refers to instruction that has an academic focus with teacher and student interaction and teacher monitoring (Palincsar & Brown, 1984). This type of instruction relies on the teacher to explain, model, and think aloud about the academic focus of the lesson. In addition, explicit instruction relies on time for students to practice a newly learned skill or strategy with teacher guidance and feedback. Finally, explicit instruction enables students to become independent learners.

Explicit instruction is an important instructional strategy for students to become actively engaged in learning and ultimately independent learners. Explicit instruction provides students with a learning environment that supports student autonomy, internalization of new skills, and allows students to value learning and achievement, which fulfills the self-determination theory (SDT) (Deci & Ryan, 1985). SDT is a self-motivation approach that "leads to the types of outcomes that are beneficial both to individuals and to society." (Deci, Vallerand, Pelletier, Ryan, 1991, p. 342). In addition, the NRP (2000) indicated the importance of using explicit instruction to teach comprehension strategies:

The rationale for the explicit teaching of comprehension skills is that comprehension can be improved by teaching students to use cognitive strategies, or to reason strategically when they encounter barriers to understanding what they are reading. Readers acquire these strategies informally to some extent, but explicit or formal instruction in the application of comprehension strategies has been shown to be highly effective in enhancing understanding (p. 14).

Researchers have demonstrated that explicit instruction has influenced reading comprehension and teacher effectiveness (Baumann, 1984; Meyer & Poon, 2001; Pearson & Dole, 1987; Pearson & Gallagher, 1983). Baumann (1984) found positive effects on teaching main idea when students received an explicit instruction paradigm as compared to traditional basal instruction. Meyer and Poon (2001) demonstrated that explicit instruction for teaching the structure strategy approach increased total recall, memory, and top-level structure for adults. Participants in both studies developed more awareness about the need to be strategic when reading a text.

Accordingly, research has shown that teachers who employ the principles of explicit instruction have children who learn specific comprehension strategies (Armbruster et al.; Armbruster & Armstrong, 1992, Palincsar & Brown, 1984; Pearson & Dole, 1987). These studies investigated the effects with an older population of students, and there is a need for this type of research with younger students (Duke, 2000, 2004; Englert & Hiebert, 1984; RAND Reading Study Group, 2002).

However, research on the effectiveness of explicit instruction has not included such comprehension strategies as awareness of rhetorical patterns, modeling, and graphic

organizers into one instructional intervention for younger students. Thus, I chose an explicit instructional model that incorporated scaffolding, modeling, thinking aloud, rhetorical patterns, and graphic organizers in order to teach third-grade students expository text comprehension strategies. Research has indicated that developing students' awareness of rhetorical patterns (Armbruster et al., 1987; Meyer & Poon, 2001; Taylor, 1982; Williams, 2005) and utilizing graphic organizers (Armbruster, Anderson, & Meyer, 1991; Berkowitz, 1986; Griffin & Malone, 1995; Griffin & Tulbert, 1995) are effective instructional strategies for improving readers' ability in using a structure strategy approach and improving reading instruction (NRP, 2000).

Scaffolded Instruction

Students become participants in their cognitive development when teachers and peers scaffolded learning and instruction. In an educational setting, teachers scaffold instruction by structuring the task at a challenging level and "constantly adjusting the amount of adult intervention to the child's current needs and abilities" (Berk & Winsler, 1995, p. 29). By scaffolding instruction, teachers help their students perform some task or skill in a more effective way than the students could do without such assistance (Tudge & Scrimsher, 2003, Vygotsky, 1978). Vygotsky referred to this instruction as *other-directed to self-directed* stages of learning. During instruction, teachers gradually diminish the scaffolding or responsibility. This diminishing of responsibility has been called by Pearson and Gallagher (1983) as the *gradual release of responsibility*. At the beginning of the instruction, the teacher is responsible for building comprehension, but, as lessons continue, students become more and more responsible for their own comprehension.

Providing such scaffolded instruction is beneficial in developing effective reading comprehension. Palincsar and Brown (1984) found scaffolded instruction to be a vital component in their reciprocal teaching intervention. Students were taught comprehension-monitoring strategies that enhanced reading comprehension. In addition, Wood et al. (1976) discussed that scaffolded instruction is an important aspect in developing instruction. In this study, the primary component of explicit instruction was to incorporate scaffolded instruction. The goal of this component is to allow students to "internalize the knowledge in order to become independent." (Beed, Hawkins, & Roller, 1991, p. 649).

Research Supported Instruction

Research has indicated that explicit instruction has the potential to increase expository text comprehension. For this study, the explicit instructional intervention involved two instructional strategies situated within an interactive learning environment. In this section, I discuss the instructional strategies, modeling and thinking aloud, and graphic organizers. Finally, I state my research questions, definitions, and a summary to conclude Chapter 1.

Physical and Mental Processes

Two critical components of the explicit instructional intervention used in this study were modeling and thinking aloud (Pearson & Dole, 1987). Modeling consisted of the teacher explicitly demonstrating how to construct an appropriate graphic organizer and to write a summary about an expository text. Thinking aloud consisted of the teacher verbalizing the use and application of rhetorical pattern knowledge in relation to graphic organizers and summaries.

Modeling. The roots of modeling lie in Bandura's (1977) social learning theory. In this theory, children learn best when they observe modeled behaviors. This observational learning is heightened because children are learning all the time from the modeling around them. For example, children learn from their parents who model without knowledge of this occurrence or from a teacher. In addition, students have the opportunity to learn in an educational setting when they perceive the importance of an activity due to the teacher being the "high-status" model (Bandura, 1977).

The use of teacher modeling has been an important instructional strategy to develop reading behavior and comprehension for many years (Dole, Duffy, Roehler, & Pearson, 1991; Duffy et al., 1987; Methe & Hintze, 2003; Palincsar & Brown, 1984; Smolkin & Donovan, 2001). Methe and Hintze (2003) found teacher modeling increased third-grade students' on-task reading behavior. Methe and Hintze noted that the most effective way to influence reading strategies or desired behaviors is to model the behavior, in this case, a reading strategy.

Thinking aloud. Another important strategy that parallels modeling is thinking aloud. According to Davey (1983), thinking aloud is a metacognitive technique in which the teacher verbalizes the cognitive processes of reading comprehension. When teachers use a think aloud strategy, they create instruction that minimizes the guesswork for students in learning how reading really works and enables students to become independent readers (Bransford et al., 2000; Duffy, Roehler, & Herrmann, 1988).

Research has demonstrated that thinking aloud is an appropriate reading strategy for teachers and students to use in order to explain how they think as they read (Baumann et al., 1992; Baumann, Jones, & Seifert-Kessell, 1993; Duke, 2004; Kucan & Beck,

1997). In addition, thinking aloud increases reading comprehension and develops cognitive processes (Block, 2004; Oster, 2001). Baumann et al. (1993) found think alouds to be an integral component in assisting students to monitor their reading comprehension and to utilize a variety of strategies when faced with a reading challenge.

Furthermore, modeling and thinking aloud do not only demonstrate appropriate reading behaviors but also "the invisible mental processes which are at the core of reading" (Duffy et al., 1988, p. 762). Research has shown that teachers who explicitly explain the mental processes associated with reading strategy overtime will gradually increase students' text understandings (Duffy et al., 1987). Thus, modeling and thinking aloud, as described above, are powerful strategies in teaching reading comprehension (Dole, Brown, & Trathen, 2004; NRP, 2000).

Graphic Organizers

Multiple studies have examined the effectiveness of graphic organizers on text comprehension (Armbruster et al., 1991; Berkowitz, 1986; Boothby & Alvermann, 1984; Griffin & Malone, 1995). Armbruster et al. (1991) taught fourth –and fifth-grade students to organize the problem/solution structure in their history textbook by creating graphic organizers. Furthermore, Berkowitz (1986) compared two graphic organizer interventions involving a social studies textbook. Berkowitz (1986) reported significantly higher scores on immediate and delayed free recalls with students who had become proficient in creating their own graphic organizers as compared to students who did not create their own organizers.

According to Griffin and Malone (1995), explicit graphic organizer instruction assisted fifth-grade students to remember more expository material. Thus, by organizing

this information into a visual representation, students developed an awareness of the writer's text structure and ultimately increased reading comprehension and learning. Boothby and Alvermann (1984) noted that graphic organizers allowed fourth-graders to score higher on immediate and delayed recall measurements. The graphic organizers revealed the relationship between important ideas and assisted students in recalling these ideas.

Thus, a graphic organizer assists students in isolating important information, obtaining the author's message, and seeing the connections between concepts (Dunston, 1992). A graphic organizer enables readers to extract, remember, and retrieve information from expository text (Holley & Dansereau, 1984). In addition, graphic organizers allow students to organize the text's main ideas and details (Chambliss & Calfee, 1998), which assists in reading comprehension. By using graphic organizers as described by Chambliss and Calfee (1998), my designed intervention assisted third-grade students to learn about rhetorical patterns and improve their expository text comprehension.

Even though previous research has found graphic organizers to be an effective instructional tool (Armbruster et al., 1991; Berkowitz, 1986; Boothby & Alvermann, 1984; Griffin & Malone, 1995), graphic organizer research has excluded students younger than fourth-grade. This exclusion is surprising because the current situation indicates that effective expository reading comprehension instruction should be a research priority for those students who struggle with reading and understanding expository text (Armbruster & Armstrong, 1992; NRP, 2000; RAND Reading Study Group, 2002). My study examined how third-graders used graphic organizers to compose a written summary of an expository text and represent rhetorical patterns.

Research Questions

With this study, the following research questions were addressed:

1. How do teacher-student interactions differ between the intervention classrooms

and the traditional Guided Reading classroom?

> a. How do the intervention teachers scaffold expository text
>
>   comprehension?
>
> b. What is the ratio between teacher/student responsibility over time for
>
>   the two types of instruction, explicit incorporating graphic organizers
>
>   and Guided Reading?

2. How effective is explicit instruction of expository text structure incorporating graphic

    organizers in comparison to traditional Guided Reading in developing comprehension

    of expository text as measured by written summaries with third-grade students of

    various reading levels?

    a. How does explicit instruction of expository text affect how third-grade

        students represent text structure graphically?

    b. How does explicit instruction of expository text affect how third-grade

        students use their graphic organizers to compose a written summary?

    c. How does explicit instruction of expository text affect how accurately third-

        grade students summarize expository text?

Definitions

The organization of the following definitions is conceptual rather than

alphabetical. The three conceptual areas are general terms, graphic organizers, and

instructional strategies.

General Terms Important for My Study

    Explicit instruction. Explicit instruction within this study refers to instruction that has an academic focus with teacher and student interaction and teacher monitoring (Palincsar & Brown, 1984). Explicit instruction for this study involved modeling, guided practice, and independent practice (Dole et al., 1991; Pearson & Dole, 1987). Specifically, the intervention teachers and teaching assistant modeled and used a think aloud strategy to create a specific graphic organizer based on text structure using the main ideas and details. Then, the teachers and teaching assistant modeled how to write a summary using those ideas from the graphic organizer. After modeling, a gradual release of responsibility from the teacher to the student occurred when students began guided practice to create a specific graphic organizer and write a summary. Finally, teachers and the assistant required students to apply the learned strategy for independent practice (Pearson & Dole, 1987).

    Expository text. Expository text organizes content into accepted rhetorical patterns (Chambliss & Calfee, 1998). These rhetorical patterns relate to the author's purpose, which can be to inform, argue, or explain. According to Chambliss and Calfee (1998), expository texts "take the shape as the reports and essays found in the worlds of business, government, and academe" (p. 30).

    Gradual release of responsibility. Pearson and Gallagher (1983) referred to a gradual release of responsibility when teachers diminish scaffolded instruction. When diminishing responsibility, the "teacher assumes much of the responsibility for building students' understanding early in lessons, but, as lessons progress, students assume more and more responsibility." (Dole et al., 1991, p. 255).

Guided reading. According to Fountas and Pinnell (1996), Guided Reading is part of a teacher's balanced literacy approach that enables children to use and develop effective reading strategies in a small-group setting. This approach provides an opportunity for students to read a variety of texts and practice strategies for oral reading and comprehending while working in small groups. The teacher is responsible for choosing an appropriate text and supporting the children before, during, and after reading (Fountas & Pinnell, 1996).

Interactive learning environment. In general, an interactive learning environment is one where students work in small groups to comprehend, learn new information, or to create a shared product (Harris & Hodges, 1995). For the purposes of this study, an interactive learning environment provided an opportunity for students to become active in the exchange of ideas, which leads to higher-level thinking (Gambrell et al., 2000).

Text structure. Text structure refers to the overall organization of ideas in a text (Meyer, 1985). Chambliss and Calfee (1998) noted that a small set of rhetorical patterns known by authors and readers have developed to organize the ideas in expository text.

Reading comprehension. In order to comprehend written or spoken material, a reader must engage in a cognitive process that integrates skills and strategic processes (NRP, 2000). According to the RAND Reading Study Group (2004), this cognitive process occurs when a reader extracts and constructs meaning through interaction and involvement with the material. For the purposes of this study, a reader comprehended expository text when the reader extracted important ideas and details to construct a graphic organizer and write a succinct summary that reflected the important ideas and their logical relationships in the text.

Reading level. A student's reading level refers to his/her reading development in regards to learning needs and the ability to process text (Fountas & Pinnell, 2001). A reading level indicates how well a student is able to decode and comprehend narrative and expository texts. A student's reading level may be temporary and dynamic (Fountas & Pinnell, 1996). A teacher periodically examines a student's reading level based on ongoing observation, and formal and informal assessments. In this study, all third-grade students were placed into a Guided Reading group based on the student's individual reading level as determined by testing and teacher evaluation.

Scaffolded Instruction. In an educational setting, teachers use scaffolded instruction by structuring the task at a challenging level and "constantly adjusting the amount of adult intervention to the child's current needs and abilities" (Berk & Winsler, 1995, p. 29). By scaffolding instruction, teachers help their students perform some task or skill in a more efficient way than the students could do on their own.

Summary. A summary is a recall of text that identifies the important elements and the author's overall theme (Winograd, 1984). Brown, Palincsar, and Armbruster (1983) noted that the "ability to summarize information is important to understanding and remembering texts" (p. 968). For the purposes of this study, students wrote a summary that tells what the text was about including the important information and details and how they are related.

Zone of proximal development. Vygotsky (1978) theorized that instruction should lead a student's cognitive development by working in the "zone of proximal development." The zone of proximal development is the distance between what the child

could learn unaided and what the child could learn with assistance from a more knowledgeable other, whether teacher or peer.

Graphic Organizers

Graphic representations of text. Graphic representations of text are the diagrams used to depict the relationship between the ideas presented by the author (Chambliss & Calfee, 1998). These representations allow students the opportunity to follow the text design such as topical net (Chambliss & Calfee, 1998). Topical net, matrix, and linear string were the graphic organizers utilized for this study.

Descriptive rhetorical pattern. A descriptive text presents a reader with attributes about an object, like a picture that reveals one moment in time (Chambliss & Calfee, 1998).

Explanation rhetorical pattern. An explanation text presents a series of sub-explanations that are logically ordered to lead a reader from a naïve understanding to a more complex understanding. This type of text "fills the gap between a young reader's understanding of a phenomenon and the scientific explanation by presenting important information, metaphors, and analogies" (Chambliss & Calfee, 1998, p. 33). The explanations in this study could be represented by topical net, linear string, or matrix graphic organizers.

Linear string graphic organizer. A linear string graphic organizer is the most common representation for a sequential text. The linear string organizer helps a reader map out a series of events according to the passage of time (Chambliss & Calfee, 1998).

Matrix graphic organizer. A matrix organizer visually represents ideas presented in one type of descriptive expository text. It aids a reader in diagramming the central

ideas in an expository text that compares or contrasts. In a matrix organizer, a reader

organizes the ideas across two or more dimensions in which each subtopic deals with the

same attributes (Chambliss & Calfee, 1998).

Sequence rhetorical pattern. A sequence text presents ideas that show a

progression of time (Chambliss & Calfee, 1998). A sequential text could describe a

process or procedure using sequential steps.

Topical net graphic organizer. A topical net graphic organizer visually represents

ideas presented within a type of descriptive expository text (Calfee & Chambliss, 1987).

This type of organizer groups ideas into three to five subtopics based on their association

with the overall topic (Chambliss & Calfee, 1998).

Instructional Strategies

Modeling. Modeling is what a "teacher does to show novice readers how to do

something they do not know how to do" (Duffy et al., 1988, p. 762). According to

Bandura's (1977) social learning theory, children may learn best when they observe

modeled behaviors. In this study, modeling played a vital role in students acquiring new

behaviors, skills, or strategies from observing the desired behavior or activity.

Think alouds. Think aloud is a "metacognitive technique or strategy in which a

teacher verbalizes thoughts aloud while reading a selection orally, thus modeling the

process of comprehension" (Harris & Hodges, 1995, p. 256). This metacognitive

technique involves overt, verbal expressions where a reader describes the process of

constructing meaning from texts (Baumann et al., 1993).

Summary

Using the theory of a cognitive conceptualization of reading, my research begins to develop effective instructional practices that might lead younger elementary students to comprehend expository text. I focused on two vital aspects in comprehending expository text. First, for good readers, expository text comprehension occurs when a reader uses a structure strategy approach and then creates a mental representation of the ideas in the text and their logical relationships. In addition, good readers rely on a well-designed text to enhance comprehension through a detectable text structure that is coherent (Chambliss & Calfee, 1998). Second, research indicates a need to develop formalized expository instruction in order to create readers who can read and comprehend expository text (Armbruster & Armstrong, 1992; NRP, 2000; RAND Reading Study Group, 2002). However, elementary school children lack the proper instruction with expository text that would allow them to develop appropriate expository text comprehension strategies (Duke, 2000, 2004; Durkin, 1978-79; Pressley et al., 1996).

A cognitive perspective of reading was crucial to my study. Within this perspective, reading is viewed as an active process (Pressley & Afflerbach, 1995). The learner is not a passive recipient but actively negotiating the meaning of text within a social context (Bransford et al., 2000; Vygotsky, 1978). This social context became the framework for my study and the use of an interactive learning environment. The interactive learning environment provided the appropriate atmosphere for students to learn higher levels of cognitive processing (Vygotsky, 1978).

The instructional intervention in this study highlighted multiple literary strategies and was grounded in many important theories and ideas drawn from research. Explicit

instruction incorporating graphic organizers assumed that combining knowledge about

rhetorical patterns, graphic organizers, and explicit instruction with scaffolding,

modeling, and thinking aloud, embedded within an interactive learning environment,

would assist third-grade students in comprehending expository text (Chambliss, 1995;

Chambliss & Calfee, 1998; Duke, 2000, 2004; Griffin & Malone, 1995; Vygotsky, 1978).

The National Reading Panel Report (2000) and Simmons, Griffin, & Kameenui (1988)

contended that text structure awareness, graphic organizers, and explicit instruction are

effective comprehension strategies to use in comprehending expository text.

     Chapter 2 includes key research on the components of explicit instruction

incorporating graphic organizers that provides background for the development of this

intervention.

CHAPTER TWO

Review of Literature

Overview

As I discussed in Chapter 1, students of all ages often have difficulty

comprehending expository text (Duke, 2004; Spiro & Taylor, 1980). This difficulty is

discouraging because a dominant feature in content-area instruction (Duke, 2000) and

success in work and society depends largely on comprehending expository text (Duke,

2004, Durkin, 1993). Chambliss and Calfee (1998) noted, "Children's early reading

experiences have prepared them poorly for comprehending and learning from the

exposition so common to content area textbooks" (p. 119). Even though research suggests

developing effective expository text comprehension instruction is a priority (NRP, 2000;

RAND Reading Study Group, 2002), the goal of teaching elementary students *how* to

read expository text remains discouraging (Almasi, 2003; Chall, Jacobs, & Baldwin,

1996). This study examined expository text comprehension instruction by investigating

the effects of explicit instruction incorporating graphic organizers on the comprehension

of three third-grade classrooms in comparison to a control group.

This chapter reviews the literature on how adults and children comprehend

expository text, the influence of text design on comprehension, the components of the

instructional framework, and research supported instruction. The section on adults and

children discusses studies that reveal how these two groups of readers comprehend

expository text. The second section focuses on a text design framework and research that

links structure strategy and text design together. The final two sections establish that

explicit instruction that incorporates multiple instructional strategies embedded in an

interactive learning environment, are appropriate instructional strategies for enhancing expository text comprehension.

How Adults and Children Comprehend Expository Text

In Chapter 1, I focused on the differences between good and poor readers. Good readers tend to be older and poorer readers tend to be younger, although of course it is possible to find adults who struggle and children who have learned adult strategies at a young age. Because I focused on young readers who presumably have not learned adult strategies, Chapter 2 is organized according to the contrast between adult and child readers rather than the contrast between good and poor readers per se.

Adult Readers

Throughout adulthood, good reading comprehension skills are important in order to maintain a competent and independent life (Meyer & Poon, 2001). Pressley and McCormick (1995) noted that one important comprehension skill is the ability to analyze text structure. This skill promotes memory and comprehension of text. Research suggests that adult readers comprehend text by using text cues that match to a text schema and then use that schema to represent the text's overall structure (Meyer & Freedle, 1984; Meyer & Rice, 1982). Research, however, has revealed that some adults do not comprehend exposition using this structure strategy. The following two sections describe more clearly the differences between the structure strategy approach and using a default list. I first consider research that relates to adults who use a structure strategy approach in recalling expository text information. I then discuss adults who use a default list strategy.

Structure strategy. Adults who are good readers recall texts in a similar fashion to the structure found in text (McGee, 1982, Meyer, 1975). In other words, their recalls

match a text's gist composed of important ideas organized comparably to the text's organization. Apparently, good adult readers look for patterns in the text that help them recall the important information. As discussed in Chapter 1, Meyer and her colleagues (e.g., Meyer, Brandt, & Bluth, 1980) have developed a model of text comprehension to explain an outcome that they call structure strategy. This section describes their research.

To provide research support for the structure strategy, Meyer et al. (1980) contrasted how good and poor readers processed two expository texts. Meyer et al. hypothesized that good readers use structure strategy to look for patterns that link the ideas of the text together. Then, good readers identify a top-level structure, which they can use to decide how the ideas in the text match this pattern. Further, the authors hypothesized that poor readers do not use this strategy. Rather they revert to a list to recall information with no apparent organization.

One-hundred and two good, average, and poor ninth-grade students from a junior high in Mesa, Arizona participated. The Stanford Achievement Test, a district reading test, and a rating from the English teachers provided the basis for grouping the students into good, average, and poor readers.

The materials consisted of passages created by Meyer et al. (1980) with a clearly defined top-level structure: comparison and problem/solution. The comparison passage was about dehydration, and the problem/solution passage was about supertankers. Each structure had two versions, with-signaling and without signaling, for four passages. The with-signaling passages had an explicit stated top-level structure. For example, the with-signaling problem/solution passage began with "A problem of vital concern is the prevention of oil spills from supertankers" (Meyer et al., 1980, p. 82). The readers read

two of the four passages contained in one booklet. Meyer et al. created the booklets through a stratified random assignment procedure. This procedure assigned students "to with –or without-signaling versions of the passages and order of presentation of the two passages" (p. 83). Each booklet contained one passage about dehydration with a comparison structure and one about supertankers with a problem/solution structure. After reading a passage, the reader wrote a summary about the information for an immediate recall measure. Then, one week later, readers completed the same task about the passages for a delayed recall measure.

Meyer et al. (1980) analyzed the top-level structure in each reader's immediate and delayed recall to determine if it was the same as the structure used by the author. These researchers found that only 50% of the ninth-grade students used the structure strategy at all. However, as Meyer et al. hypothesized, good readers did use the structure strategy approach in their immediate and delayed recalls of the comparison and problem/solution structures. In contrast, the poor readers did not use a structure strategy but defaulted to a listing strategy of details. Meyer et al. indicated that 99% of the average and poor readers used this type of strategy in both the immediate and delayed recalls.

The Meyer et al. (1980) study indicated that a good reader's ability to organize the author's information in the same format in which it was written gives the reader the advantage in remembering important concepts. Readers who use the structure strategy have a retrieval guide that is necessary in understanding the author's message and in comprehending the material (Meyer, 1985). However, this strategy distinguishes good and poor readers.

Three follow-up studies of the use of the structure strategy have fine-tuned these earlier results. Meyer and Freedle (1984) researched the effects of four different text structures, comparison, causation, problem/solution, and a collection of descriptions, on memory. The researchers created four passages that contained the same information but differed on overall text structure. In their study, 44 teachers from an educational research graduate class were randomly assigned to one of four groups. The experiment consisted of two sessions. In the first session, the groups listened to one of four passages and then wrote a free recall. The participants had to write down everything they could remember in sentence form. One week later in session two, the participants wrote another free recall about the previously read passage. Meyer and Freedle indicated that the participants tended to use the same structure in organizing their recalls as in the original overall text structure. In addition, the researchers found the participants to recall more ideas when listening to passages containing a comparison, causation, or a collection of descriptions than a problem/solution structure. As Meyer and Freedle noted that, the participants who listened to the problem/solution passage tended to recall information with a different top-level structure than problem/solution. This difference may be due to the participants rejecting the passage's message and providing their own schema or due to the construction of the passage. These findings suggested that adults were adhering closely to a structure strategy approach in comprehending expository text even when they were using a text schema that differed from the text structure.

Meyer and Rice (1982) conducted similar research examining the effects of various versions of a passage on the organization and recall of information. The researchers created five different versions of a passage about railroads. The two overall

text structures were comparison and collection. Using over 500 adults of all ages, Meyer and Rice hypothesized that a comparison and collection structure would result in participants producing recalls that matched the text's structure. One half of the adults participated in one experimental session where they read one version of the railroad passage and recalled it by writing everything they could remember in sentence form. Then, they answered questions about logical relations, names and numbers. The other half of the participants did not answer specific questions because they returned one week later to write another recall about the passage. Meyer and Rice found that adults who used structure strategy organized their recalls according to a comparison or collection text structure similar to the structure in the passages read. Further, Meyer and Rice indicated that participants who were lower scoring adults tended to produce recalls according to the default strategy (list-like).

Finally, Chambliss (1995) considered the effects of structure strategy in lengthy texts with an argument structure. Using three experiments, Chambliss investigated the ability of 80 advanced placement students in recognizing the argument pattern, identifying argument parts, and creating the gist of an argument. The author found that successful readers used the structure strategy approach in recognizing an argument and even distinguishing it from an informational text structure. By using a structure strategy approach, the successful readers employed three strategies, locating the claim, identifying it, and using it to identify the argument structure. Further, Chambliss found that successful readers could create a gist representation of an argument similar to the structure in the text.

As presented above, structure strategy is an important comprehension strategy that adult good readers use in comprehending expository text. Meyer et al. (1980) found good ninth-grade readers to employ this effective strategy in order to organize and remember expository text information. Additional research explored how differences in text structure affect the structure strategy (Chambliss, 1995; Meyer & Freedle, 1984; Meyer & Rice, 1982).

Default list. In contrast to adult good readers, adult poor readers tend to lack awareness in using a structure strategy approach when reading and comprehending expository text. Poor readers rely on a default list, in which they try to remember some points about the text with no overall organization (Meyer & Rice, 1982).

In this section, I highlight only those findings relevant to adult poor readers (loosely defined to include ninth-grade students) and their use of a default list. As reviewed earlier, Meyer et al. (1980) studied the recall ability of good, average, and poor ninth-grade students. Meyer et al. found most of the poor readers to recall the immediate and delayed comparison (63%) and problem/solution (56%) passages by organizing their top-level structures differently from the author. In contrast, Meyer et al. found the majority of good readers to use structure strategy when recalling information for the immediate and delayed comparison (40%) and problem/solution (41%) passages. The poor readers employed a default strategy in which they listed details with no attempt to relate the details to an overall idea or author's message.

Surprisingly, Meyer et al. (1980) noted that signaling influenced the underachievers in the study. The underachievers were those students who were good decoders but had poor comprehension skills. Signaling appeared to increase the

underachievers recall on the immediate measure, especially for the problem/solution structure. The problem/solution structure contained one-third more signaling than the comparison structure. When signaling was absent, similar readers recalled the information by using the default list. Apparently, signaling cued the structure, enabling the underachievers to use the structure strategy, which they might have been unable to do without the help of signaling. Meyer et al. suggested that signaling assisted readers, who cannot use structure strategy, in learning and retrieval of important information.

Children Readers

The ability to retain and recall important information from expository text relies on a reader possessing a set of comprehension strategies. Educators often note the difficulty young readers have in comprehending and recalling information from expository text (Taylor, 1982). Children may have this difficulty with expository text because they are not familiar with the text structures and may not be able to formulate their own mental representation of the author's organization (Chambliss & Calfee, 1998). In this section, I discuss structure strategy and a default list as used by children readers.

Structure strategy. In the previous section, I discussed research that showed adult good readers using structure strategy to assist them in recalling and comprehending expository text. As Meyer et al. (1980) made clear, adult good readers utilize this effective strategy to recall text based upon the author's overall text structure. However, these studies used adult readers. In this section, I discuss a number of studies focused on how well young readers use the structure strategy.

McGee (1982) investigated young readers and their ability to use a structure strategy approach in comprehending expository text. This study revealed promising but

mixed results. The purpose of the McGee study was to present a clearer picture about good and poor younger readers' awareness of text structure and the effect it had on recall.

McGee (1982) conducted an experimental study by using 60, randomly selected third -and fifth-grade students from four elementary schools. The participants consisted of 20, good third -and fifth-grade readers and 20, poor fifth-grade readers. The third-grade good readers and the fifth-grade poor readers were reading on a 3.0 – 4.5 reading level. The fifth-grade good readers were reading on a level of 5.5 – 7.0.

The materials chosen for this study were two 125-word third-grade expository passages with an overall descriptive top-level structure used by Meyer (1975). McGee (1982) chose third-grade level passages so the text level would not be too difficult for all students. Using those passages, McGee created a booklet for each reader that contained a practice passage and two recall passages (seeds and animal teeth).

Participants received individual booklets in which they were told to read the practice passage, to complete a distracter problem, and then to retell everything they could remember reading. The recall passages required the same three steps as the practice passage. Two independent raters scored the oral recalls by analyzing the similarity between the students' recall and the author's text structure.

For data analysis, McGee (1982) used a mean proportionate recall score and a mixed analysis of variance including reading ability/grade, and level of importance of ideas. The results indicated that fifth-grade good readers recalled more total ideas ($M = .380$, $SD = .145$) than did fifth-grade poor readers ($M = .289$, $SD = .118$) and third-grade good readers ($M = .233$, $SD = .118$). Twelve fifth-grade good readers used full text structure in their recalls compared to two fifth-grade poor readers and zero third-grade

good readers. In addition, McGee found a significant main effect for reading ability and grade.

McGee (1982) found that more fifth-grade good readers used a structure strategy approach in recalling expository text than fifth-grade poor readers and third-grade good readers. However, McGee noted that the fifth-grade poor readers were beginning to develop sensitivity to this strategy in comparison to the third-grade students. In discussing the results, McGee presented two possible reasons for differences in the above results. One reason involves the relation of age and structure strategy. According to McGee, as students enter fourth-grade, they begin to read more expository texts and thus begin to develop concepts about expository text structure as compared to younger grades. The second reason is in relation to text difficulty. The higher scores for the fifth-grade good readers may be due to the relatively easy text. The passages created for McGee's study were on a third-grade reading level leading to few decoding issues for fifth-grade good readers. Further research should include developing instruction focusing on text structure for students younger than fifth-grade and involving real-life materials based on students' reading abilities.

In their 1987 study, Richgels, McGee, Lomax, and Sheard examined students' structure strategy and their ability to recall different expository text structures. Fifty-six sixth-grade students from two university laboratory classrooms participated in the study. These students represented a variety of abilities and backgrounds from an industrial community.

Richgels et al. (1987) created 24 passages for each of four text structures: collection, comparison/contrast, problem/solution, and causation. The researchers

produced four passages for each structure that were similar in graphic organizer representation, number of words and sentences, and topic and detail relations. Over an eight-week period, with one 50-minute session each week, the students used the passages to complete various tasks like matching, recall, interviews, and prior knowledge of the content.

The matching task involved the students analyzing the ideas in the passage to determine how they are related to each other. Then, the students made a decision on the ideas presented in two other passages. They had to decide which passage contained ideas presented in a similar manner to the first passage. During the recall task, students received two booklets over a two-week period. Each booklet contained two of the four text structures. The students had to read each passage and note its organization. The interview consisted of the students explaining why they made certain choices in the matching task. Finally, the prior knowledge task consisted of the students using a Likert scale to indicate how much they knew about the topic.

Using chi-square tests, Richgels et al. (1987), showed significantly more students to organize their recall with a full-structure for the comparison/contrast, collection, and problem/solution text structures than for the causation structure. The comparison/contrast text structure revealed a higher number of students organizing their compositions based on a full structure. The causation text structure produced significantly lower scores for organization, recall, and interviews. These findings are noteworthy because they indicate that sixth-grade students possess a higher ability to use a structure strategy approach when reading a comparison/contrast structure than a causation structure. Richgels et al.

noted that young students are "promising candidates for instruction in how to apply a structure strategy to other structures" (p. 192).

In her quantitative study, Taylor (1980) investigated the ability of fourth –and sixth-graders to recall expository text and their sensitivity to text structure. Fifty-one sixth-grade good and poor readers plus fourth-grade good readers served as participants. The researcher created two expository passages about animal protection. One passage was on a sixth-grade level and the other one was on a fourth-grade level. The passages contained a descriptive top-level structure as described by Meyer (1975). Each participant read a practice passage orally recalling information from memory, and then conducted the same procedure with the test passage. Taylor scored each recall to determine how a student used the top-level structure in his or her recall organization.

From her data analysis, Taylor (1980) revealed developmental differences between fourth and sixth-graders and their ability to utilize a structure strategy approach. Taylor found that sixth-grade good readers (M = 25.06) and sixth-grade poor readers (M = 21.76) were able to recall more of a passage than fourth-grade good readers (M = 16.88). In addition, results suggested, "children's memory for expository material is enhanced if they follow the top-level structure of the text to organizer their recalls." (p. 409). Taylor found that sixth-grade good readers (M = 24.88) and sixth-grade poor readers (M = 24.43) who followed the top-level structure remembered more than their peers who did not use the top-level structure. However, Taylor indicated that fourth-grade good readers demonstrated a low level of sensitivity in using the top-level structure in their recalls (M = 22.00). These findings suggest that age and ability affect children's ability to recall expository text.

Research indicates that children do possess the ability to use structure strategy when recalling expository text (McGee, 1982; Richgels et al., 1987; Taylor, 1980). Other researchers have found similar results that support the notion that some elementary students have text structure schemata (Chambliss & Murphy, 2002; Englert & Hiebert, 1984; Taylor, 1982; Taylor & Beach, 1984). It is possible that instruction in text structure schemata could teach text schemata to students even at an early age.

Default list. It is common to find adult readers who rely on a default list when trying to recall information from expository text according to past research (Meyer et al., 1980; Meyer & Rice, 1982). Children are even more likely to use this approach, apparently because they do not know either that exposition has a structure or they do not know all of the structures that authors cue into exposition.

A study conducted by Kucan and Beck (1996) considered the effects of genre on young readers as they processed and summarized narrative and expository text. In their study, four fourth-grade students met with the first researcher to read aloud a passage. While reading, students stopped periodically to describe their thought processes. After reading and thinking aloud, each student wrote a summary of the passage. Data analysis included review of transcripts for the kinds of processing and analysis of summaries through comparing the student's ideas to the important ideas presented in the passage. Kucan and Beck found that genre did affect students' processing and summaries. The researchers indicated that narrative texts appeared to produce higher processing scores and inclusion of important ideas in the summaries. All four participants scored significantly lower on the expository summary than on the narrative summary. Specifically, students had a difficult time with expository text because they appeared to

lack knowledge about the structure strategy or text organization (Meyer, 1975). Kucan and Beck suggested that expository reading instruction should involve "helping the students become more familiar with how information is presented in expository text by discussing the variety of structures such texts may include and the purposes authors have for employing them" (p. 281).

In a similar study, Cote et al. (1998) examined how fourth- and sixth-grade students comprehended and remembered expository text through think-aloud protocols. Cote et al. conducted two separate experiments in order to analyze the processes of young children reading expository text and the relationship between those processes and mental representations.

In their first experiment, 12 fourth-grade and 12 sixth-grade students who were from two classrooms at each grade level were chosen to participate. One-third of the students in each grade were below average, average, and above average, respectively, as indicated by a statewide standardized comprehension test.

The researchers selected three descriptive text passages from prior research on children and adults' comprehension. These passages were modified and revised to become similar in sentence and word length. Cote et al. (1998) designed the passages so that each student would read a relatively easy and harder passage during the procedure.

With an experimenter present, each fourth- and sixth-grade student participated in one 45 to 90 min. session. During the session, each student read two passages on a computer that revealed only one sentence at a time but still allowed the student to see the entire passage. The students knew the purpose for reading was to produce a report on the information from memory. While reading, each student read the sentences aloud and

conducted a concurrent think aloud task. This task included the experimenter asking each student to "say everything they could about how they were reading the passage, what they were doing, and what they were thinking after each sentence." (Cote et al., 1998, p. 13). In addition, the experimenter wanted the student to talk about anything he was having trouble understanding or anything that made the passage difficult. After reading, the student dictated a report to the experimenter who typed it on the computer. Students could make changes but could not refer back to the passage.

In order to determine reading processes and relationships, Cote et al. (1998) first coded the think aloud protocols for number of events, types of events, and types of reasoning. Then, the reports were scored at the gist level or the number of sentences from that passage that were included in the report.

Cote et al. (1998) found that fourth- and sixth-grade students frequently utilized paraphrasing, connecting to prior knowledge, and attempting to resolve comprehension difficulties while reading expository text. However, these students rarely attempted to "construct a macrostructure for the textbase by making connections among different sections of the passages" (Cote et al., 1998, p. 34). In addition, Cote et al. noted that the fourth and sixth-grade students produced more reports that were coherent after reading the easier passage than the harder passage. However, the fourth-grade students constructed more fragmented reports overall.

In their second experiment, materials, procedures, and design were similar to those of the first experiment except that the students read silently and did not provide a think aloud protocol. Cote et al. (1998) again selected 12 fourth-grade and 12 sixth-grade students in similar fashion to experiment one. Recall reports resulted in similar findings

to experiment one. In the second experiment, Cote et al. indicated that the many of the fourth-grade students lacked a global theme in their recalls and many of the sixth-grade students recalled a list of facts in their report for the harder passage. The researchers concluded that students tended not to identify main ideas and important details in their recalls even though the passages included structural cues and aspects.

Finally, other research has found similar results to that of Kucan and Beck (1996) and Cote et al. (1998). McGee (1982) found fifth-grade poor readers who did not use the author's top-level structure in recalling information. Similarly, Taylor (1980) researched sixth-grade readers to find that poor-readers organized their recalls with no apparent structure.

In conclusion, research indicates that reading comprehension of expository text relies on the development of a reader's use of structure strategy. Adult readers who use structure strategy may be able to recall more information and organize their recalls based upon the author's top-level structure (Meyer et al., 1980, Meyer & Poon, 2001). In contrast, adult readers who lack text structure knowledge may use a default list in recalling information with no overall focus or organization (Meyer et al., 1980). Research indicates that children readers use the same two strategies when reading expository text. Some younger readers may use the structure strategy. However, many more seem to use the default list with little awareness to an overall text structure. In this study, I developed an expository text intervention that taught children to identify the structure in expository text in order to improve comprehension.

The Influence of Text Design on Comprehension

Students read and learn from expository texts like textbooks on a daily basis. Because textbooks are often the first avenue of obtaining information in classes like science and social studies, educators and researchers may very well "need guidance in recognizing the structural patterns in textbooks so that those patterns can be taught to students" (Calfee & Chambliss, 1987, p. 358). In this section, I present the Calfee and Chambliss text design framework, which was the basis for my study, and discuss research that notes the importance of text design.

A Text Design Framework

As I discussed in Chapter 1, Meyer (1975) developed a framework for analyzing text by introducing the notion of a hierarchical structure. Analysts use this framework to analyze the top-level structure, which represents the "underlying logic and message of the text" (Meyer, 1985, p. 15). In Meyer's (1975, 1985) work, collection, cause and effect, problem and solution, comparison, and description classified the five different top-level structures. After analyzing the top-level structure, the analyst proceeds to the propositions or the sentences in the text. By analyzing the top-level structure and propositions, a reader can identify the main idea and details within the text.

An alternative framework has been developed by Calfee and Chambliss (1987; Chambliss & Calfee, 1998) and applied to analyzing text materials (Chambliss & Calfee, 1998), reader recalls (Chambliss, 1995), and student writing (Chambliss, Christenson, & Parker, 2003). Their work began with a survey of freshman college composition books to determine common patterns from a rhetorical viewpoint (Calfee & Chambliss, 1987). .

Based on their examination of the composition books, Calfee and Chambliss (1987) noted three primary purposes for expository writing: to inform, to argue, or to explain. These different purposes have different rhetorical patterns. Informative texts are organized according to descriptive and sequential rhetorical patterns. A descriptive text presents attributes about an object and is similar to a snapshot. A sequential text presents events over time analogous to a motion picture (Chambliss & Calfee, 1998) Argument text has an additional layer of structure. In an argument, the text is structured according to an idea and information to support the idea (Calfee & Chambliss, 1987; Chambliss, 1995). The final rhetorical pattern, explanation, develops a new understanding of a phenomenon by presenting a series of sub-explanations logically ordered to lead a reader from a naïve understanding to an understanding of more complexity (Chambliss & Calfee, 1998). The structure in an explanation will allow a young reader to develop a better understanding of a phenomenon.

After identifying a particular rhetorical pattern, Calfee and Chambliss (1987) found it useful to construct graphic representations to depict the rhetorical pattern. Calfee and Chambliss noted that graphic representations "are an efficient means of clearly communicating large amounts of interrelated content" (Chambliss & Calfee, 1998, p. 118).

In representing a descriptive rhetorical pattern, the possible graphic representations are a matrix, a topical net, or a list (Chambliss & Calfee, 1998). If each subtopic in a text deals with the same attributes, the pattern can be graphically represented as a matrix. If there are three to five subtopics all clearly associated with the main topic, the pattern can be represented as a topical net. If there are more than five

subtopics and/or they are not clearly associated with the same topic, the text can be graphically represented as a list. In a sequential text, the most common graphic representation is a linear string. A linear string is a series of events that progress over time. Arguments and explanations use these informational patterns within an additional structure. The support in an argument and the sub-explanations in an explanation can be either descriptive or sequential. The graphic representations identified in this study based the Chambliss and Calfee model can be found in Appendix A.

Bringing Structure Strategy and Text Design Together

There is significant research suggesting the importance of text design and the ability of students to use a structure strategy approach in comprehending expository text. A 1995 study by Chambliss investigated how good readers comprehend lengthy written arguments in three separate experiments. Using a Calfee and Chambliss (1987) text design framework, Chambliss (1995) studied 12th-grade advanced placement students' ability to recognize and construct a representation of arguments.

Eighty participants, who were part of three advanced placement English classes, were involved in this study. These participants were from two different schools located in the same middle-class suburban community in the San Francisco Bay area. The classes represented the ethnic populations of European American, Latino, Asian, and Indian in both schools. School 2 represented a slightly higher socioeconomic status and had higher mean scores on the California Assessment Program test (School 1, $M = 278$ and School 2, $M = 322$).

Throughout the three experiments, materials consisted of 14 base texts, which Chambliss selected from an original 20 written arguments about different types of

animals. These passages came from natural history books and magazines. Chambliss (1995) rewrote the 14 passages to match each experimental design. Each passage included two similar features: an introduction and conclusion, which signaled the text structure.

I report here of the first of the three experiments related to text design and structure strategy. Chambliss (1995) designed Experiment 1 to focus on how good readers recognize the argument structure and distinguish it from a topical net structure. Text versions differed according to text structure, familiarity, claim position, and signaling. Participants included a combination of 71 students from both schools. The completion of a paper/pencil comprehension test involved 63 students and the think aloud protocols involved eight students.

Chambliss (1995) created the pattern recognition (PR) measure to determine the effect of text structure and signaling with recognition. This measure included four items. By identifying the author's purpose, item one asked readers to distinguish between an argument and topical net structure. Items two and three consisted of the reader assessing his or her representation of the passage by summarizing in one sentence and assigning a score to display the importance of 10 sentences from the passage. The fourth item asked readers to provide a rationale for the assigned points. A subgroup completed think aloud protocols. Data analysis revealed that text structure highly influenced readers' responses. According to mean calculations, each dependent measure, author's purpose, summary, and claim rating, showed higher scores for an argument text structure ($M = 1.92, 1.76, 28.29$, respectively) as compared to the informational text structure ($M = 1.11, .33, 17.05$, respectively). For the think aloud protocols, again text structure strongly influenced how

readers represented the passages. Once readers recognized the claim/evidence structure, they would note it was an argument passage.

Experiment 1 made the case that good readers do use a text structure schema, the first step in the structure strategy, to recognize a written argument. Experiment 3 found that good readers structured free recalls that were based upon the structure found in the original passage, an outcome that matched the work by Meyer and her colleagues.

In a similar study, Chambliss and Murphy (2002) described how young readers represent an argument text structure. In order to accomplish this task, the researchers designed texts and tasks for the specific age group and analyses to match the work of Chambliss (1995).

The participants were 37 fourth-grade students and 27 fifth-grade students from a suburban school in Washington, D.C. area. The students were part of four, heterogeneously grouped fourth –and fifth-grade classrooms. According to a previous standardized reading test with a proficiency level score of 650.00, the students ranged from 547.00 to 777.00, ($M = 666.57$, $SD = 56.61$).

Chambliss and Murphy (2002) presented the fourth –and fifth-grade students with three argument passages. All three passages contained content about Maryland, the children's home state. The material in each passage came from two texts. One was a fourth-grade textbook approved by the school district but not used in the students' classroom and the other one was a trade book by the Maryland Historical Society. Each passage contained the same top-level argument structure with claim sentences, evidence to support the claim, explicit warrants, and vivid details to allow students to picture the

text. After reading the text, students wrote the author's main ideas and as many supporting details as possible.

In order to evaluate children's answers, Chambliss and Murphy (2002) represented the answers graphically, an approach used by Chambliss (1995). First, Chambliss and Murphy created a template representing each passage and its overall structure noting the claim, evidence, and warrants (Toulmin, 1958). Then, Chambliss and Murphy represented children's answers graphically and compared the children's graphic representations with the template. The children's representations fell into one of the following categories: accurate argument representation, inferred argument representation, topical nets, lists, and non-text responses. In addition, Chambliss and Murphy scored each representation based on the amount of recall on a score of 0-5.

By using the above data, Chambliss and Murphy (2002) conducted two analyses according to the two measures, argument representations, and amount of recall. A chi-square test analyzed the argument representations and an ANOVA test analyzed the amount of recall data. For argument representation, results indicated that 68% of the fourth –and fifth-grade students did utilize some form of hierarchical structure. However, Chambliss and Murphy found that 46% of the students constructed topical nets as compared to 14% categorized as inferred argument representations and 8% categorized as accurate argument representations. In addition, the results demonstrated that 20% of the students constructed lists and 12% constructed a response that was non-text. Overall, Chambliss and Murphy noted fourth –and fifth-grade students represented argument texts as a hierarchical structure as compared to a non-structured format. In a closer look, fifth-grade students were more likely to construct a hierarchical representation of an argument

text with an inferred argument representation than fourth-graders. Furthermore, Chambliss and Murphy found that fifth-grade students recalled more details ($M = 2.07$, $SD = 1.44$) than the fourth-grade students ($M = 1.19$, $SD = 1.15$).

Because of the differences between fourth and fifth-grade answers, Chambliss and Murphy (2002) suggested, "children may become progressively more able to represent the global discourse structure in an argument." (p. 24). These researchers found that fifth-grade students were more likely to represent an argument hierarchically and use the argument pattern to recall an argument in comparison to fourth-grade students. These findings demonstrated the possibility of a developmental trend in children to infer a text's overall structure. Chambliss and Murphy indicated that during the fifth-grade year it might be possible for some children to identify and use rhetorical patterns. Researchers should investigate instructional practices that continue to evaluate this possible developmental trend.

In conclusion, Chambliss (1995) demonstrated that good older readers could identify and construct a summary of an argument text structure by using specific text cues and a structure strategy approach. Chambliss and Murphy (2002) found that some readers as young as fourth –and fifth-grade use a structure strategy approach in constructing a hierarchical representation of an argument text structure. This research demonstrates the usefulness of the Calfee and Chambliss (1987) text design framework in understanding the relationships between how a text is designed and how readers comprehend it.

Instructional Framework

Prior to 1970, reading comprehension was viewed as a passive, teacher-dominated reading process (Durkin, 1978-1979; NRP, 2000). Then, over the past three decades, a

cognitive perspective has guided reading comprehension. As discussed in Chapter 1, a cognitive perspective of reading views reading as an active process (Pressley & Afflerbach, 1995). In this process, the reader reads a text to comprehend what was read, to construct a representation of what was understood, and then to put this understanding to use (NRP, 2000). This active process involves explicit and scaffolded instruction embedded in an interactive learning environment. The following section discusses the importance of designing reading instruction to include explicit instruction and scaffolding within an interactive learning environment

Comprehension Instruction Embedded in an Interactive Learning Environment

As previously mentioned in Chapter 1, an interactive learning environment focuses on social interaction to develop higher-level cognitive processes (Gambrell, Mazzoni, & Almasi, 2000; Vygotsky, 1978). An interactive learning environment could be considered transactional because the teacher and students or groups of peers are interacting and constructing meaning of a text jointly (Pressley et al., 1992). Within this environment, students acquire comprehensions strategies through verbal and cognitive processes (Gambrell et al., 2000).

In their 1984 study, Palincsar and Brown found positive results in reading comprehension by designing a reciprocal teaching intervention. Palincsar and Brown designed four key strategies to be used within a social context. The strategies were summarizing, questioning, clarifying text, and predicting. The researchers believed that reading comprehension developed when students were active and interacted with text.

Palincsar and Brown (1984) developed an instructional framework to include "situations where a novice is encouraged to participate in a group activity before she is

able to perform unaided, the social context supporting the individual's efforts" (p. 123). This framework echoes the theories of the zone of proximal development (Vygotsky, 1978) and scaffolding (Woods et al., 1976). The researchers conducted two separate studies. In the first study, the researchers were the teachers who acted as facilitators. Then, the follow-up study included real teachers who were trained by the researchers to use the reciprocal teaching intervention.

In Palincsar and Brown's (1984) first study, the participants were 24 seventh-grade students. These students were average decoders but had weak comprehension skills. These participants were not considered learning disabled or mentally challenged. The researchers divided the 24 students into four groups, six students each. The first two groups received a specific type of instruction. Group 1 learned about the four strategies through reciprocal teaching and Group 2 received instruction on locating information. The final two groups were considered the control groups. Group 3 was test only, which meant those students took only the assessments. The final control group received the regular reading instruction with pretests and posttests.

The materials for the reciprocal teaching and locating information instruction groups included 13 expository text-training passages that represented a range of topics from snakes to lightning. In addition, Palincsar and Brown (1984) selected 45 shorter assessment passages from the same source as the training passages. All materials were written at a seventh-grade reading level according to the Fry Readability Formula. The first author constructed 10 comprehension questions for each assessment passage. These questions were either text explicit, text implicit, or script implicit meaning a student had to consider the text and background knowledge for an answer.

Palincsar and Brown (1984) designed specific guidelines for the reciprocal teaching and locating information groups. The reciprocal teaching procedure included the teacher briefly introducing the passage and then assigning a student to become the teacher. This student asked a question, summarized, offered a prediction, and clarified a portion of the passage. The adult teacher provided any guidance, praise, and feedback necessary in order for the student to complete the activities and participate. The locating information instruction included the teacher describing how to find answers located in text and practice in test taking. Both instructional groups received 20 days of intervention. In addition, Palincsar and Brown assessed each group on a daily basis.

Palincsar and Brown (1984) found positive outcomes in reading comprehension for the reciprocal teaching intervention. The reciprocal teaching students increased their ability to answer main idea questions from 54% to 70%. In addition, these students significantly increased main idea summaries from 52% to 85%. Further, reciprocal teaching students improved drastically on their daily assessment passages from 40% correct to over 75% correct.

The remarkable findings of Palincsar and Brown' s (1984) study indicated that reciprocal teaching positively affected seventh-grade students' use of cognitive comprehension strategies. The four reciprocal teaching strategies increased the students' reading comprehension. Over time with the support from the social context and scaffolding, students were able to perform independently and learn within a zone of proximal development (Vygotsky, 1978). Further, this intervention created an environment where the teacher could "both model appropriate comprehension-fostering

activities and at the same time guide the child to participate at an ever-increasing level of competence" (Palincsar & Brown, 1984, p. 124).

Palincsar and Brown's (1984) second study mimicked the instruction and assessment of their first study. The only difference was the use of four classroom teachers who received three sessions of reciprocal teaching training from the researchers. These classroom teachers worked with seventh-grade students who either were low readers or received pullout-reading instruction. The results were similar to the first reciprocal teaching study. Thus, the researchers noted that reciprocal teaching intervention was effective with regular classroom teachers provided the teachers receive training.

Other research describes the importance of an interactive learning environment for students to improve comprehension or engage in literary acts. Almasi, O'Flahavan, and Arya (2001) conducted a comparative analysis with fourth-grade students of more and less proficient peer discussion groups. The researchers' goal was to describe features that would assist a group of children to become successful at learning to comprehend a text collaboratively. Six fourth-grade teachers and their respective average and below average students participated in peer discussion groups. All participants read and discussed nine fourth-grade reading level texts.

Almasi et al. (2001) designed the peer discussions to follow set guidelines. These guidelines included three phases: introductory/review, discussion, and debriefing. The introductory/review phase included the teacher and students establishing discussion reminders. The discussion reminders consisted of group norms regarding interaction and interpretation. Then, the discussion phase included a 20-minute peer discussion. During this phase, the teacher acted as a facilitator by scaffolding the discussions as needed. The

scaffolded instruction included times when the teachers had to model the desired

behaviors and provide support as students began to assume more responsibility for

managing the group and interpreting text. Almasi et al. noted that the teacher's role was

to cue and coach students when needed. The final phase involved the teacher leading a

debriefing session to have groups reflect on their performance. During this session, the

students reflected on their performance. Students were encouraged to think about how

they interacted with each other and whether they followed the prescribed guidelines of

the group. The teacher served as a scribe for the group by adding new guidelines and

highlighting those that needed more attention.

In order to determine more and less proficient groups, Almasi et al. (2001)

evaluated the videotaped discussions on a macroanalysis level for a natural flow of

conversation. The researchers also analyzed the transcripts of those lessons on a

microanalysis level for discourse and patterns of discourse. After careful analysis, Almasi

et al. revealed that the more proficient groups were able to sustain topics and shift back to

old topics better than the less proficient groups. In addition, Almasi et al. revealed that

the teacher's role was vital in the development of the more proficient groups. In these

groups, the teacher modeled and provided "explicit instruction regarding how to make

topics cohere and how to manage the group process." (Almasi et al., 2001, p. 118).

Further, the teacher gradually released control to the students through scaffolded

assistance. By creating such an interactive learning environment between teacher and

student then between students, peer discussions assisted fourth-grade students to

negotiate text.

In conclusion, research confirms the positive effect that an interactive learning environment has on reading comprehension and literary acts (Almasi, 1995; O'Flahavan, Stein, Wiencek, & Marks, 1992; Vaughn, Klinger, & Bryant, 2001). Palincsar and Brown (1984) revealed the powerful effect of a social context surrounding reciprocal teaching. Almasi et al. (2001) described the importance of an effective collaborative context to assist peer discussions. Further, an interactive learning environment provides an opportunity for learning and instruction to occur in a developmental zone for the ultimate purpose of creating students who are better readers (Vygotsky, 1978).

Explicit Instruction

In order for teachers to teach students cognitive strategies, they must employ the principles of explicit instruction within an interactive learning environment (Armbruster, Anderson, & Ostertag, 1987; Palincsar & Brown, 1984). Explicit instruction includes repetition of instructional events to enhance the cognitive learning process. These instructional events include modeling, guided practice, independent practice, and application (NRP, 2000; Pearson & Dole, 1987; Pearson & Gallagher, 1983). Explicit instruction provides an active learning and instructional atmosphere for students to develop cognitive processes (Dole et al., 1991; Pearson & Dole, 1987). In this section, I discuss research that highlights the effects of using an explicit instructional intervention as recommended by research (Duke, 2004; NRP, 2000; RAND Reading Study Group, 2002).

Baumann (1984) investigated the effects of explicit instruction in teaching children the main idea comprehension skill. Sixty-six, sixth-grade students participated in

the study. Based upon a reading comprehension subtest, Baumann randomly assigned the participants into two experimental groups, strategy or basal, and one control group.

Each group consisted of seven high, eight middle, and seven low-ability students. The strategy group received instruction, which consisted of five instructional steps. Over eight lessons, these students received instruction that contained an introduction, example, direct instruction, teacher-directed application, and independent practice. During the introduction, the teacher provided the purpose of the lesson and explained why this skill will help them become a better reader. Immediately following this explanation, the teacher provided a section of a text as an example. Next, the direct instruction step included "the teacher telling, showing, demonstrating, and modeling the skill to be learned" (p. 98). During this step, the teacher was leading the lesson but the students were involved with the learning. The fourth step included a shift in responsibility from the teacher to the student. The student began to complete tasks with the guidance and feedback from the teacher. The final step was independent practice in which the students assumed full responsibility for completing tasks. In the basal group, the teacher followed the prescribed instruction for main idea and supporting details according to the teacher's basal manual. The control group received instruction to develop vocabulary.

Baumann (1984) developed five measures to determine the ability of the students to comprehend main ideas and supporting details. A main idea test consisted of the students answering questions to identify main ideas in paragraphs. The second measure was a supporting details test in which the students had to identify two supporting details to match the main idea. The third measure had students comprehending the main ideas of short expository text passages. These passages were modeled or adapted from the sixth-

grade social studies text. The fourth measure consisted of a main idea outline test. This test determined how well students could summarize a short passage by creating an outline. A free recall test was the last measure. Students wrote a recall of information after reading a short passage.

Baumann (1984) analyzed the five measures using multivariate analyses of variance (MANOVA). The results revealed a significant main effect for the treatment group across all measures. This main effect indicated that the strategy group outperformed the basal and control groups. Baumann found that an explicit instructional model strongly supported the teaching of main ideas and supporting details. This model used an explicit and systematic way of teaching students an important comprehension skill.

Rinehart, Stahl, and Erickson (1986) focused their study on the effects of explicit summarization training. Their development of explicit instruction included explicit explanation, modeling, practice with feedback, simplifying complicated skills, and the use of scripted lessons. The goal of this training was to allow students to become aware of the important information in a text, which would aid in their ability to recall and write a summary.

The participants chosen were 70 sixth-graders who attended two elementary schools in small cities from a northern central West Virginia district. The population within these elementary schools varied in socioeconomic status. Each school had two sixth-grade classrooms in which Rinehart et al. (1986) randomly assigned the participants into experimental and control conditions.

Rinehart et al. (1986) chose to use a pretest posttest design. Each student took the Gates-MacGinitie Reading Test, Level D, Form 2. The comprehension mean for the control class was 30.9 and the experimental class was 32.5. Then, to measure the students' awareness of important ideas, the researchers administered the Outlining Subtest of the Wisconsin Design for Reading Development. These two measures comprised the pretest assessment. The posttest consisted of an outlining subtest and a measure to analyze how the students studied and retained major and minor information.

The teachers chosen for this study received one and one-half hours of training consisting of specific goals for summarization, principles for direct instruction, and practice with feedback. This training allowed the teachers a chance to acquire knowledge needed to assure proper instruction during the experiment. In addition, teachers received lesson scripts with explicit instructions.

Rinehart et al. (1986) developed procedures for each day of the experiment. The scripted lessons for explicit instruction included explicit explanation, modeling, practice with feedback, and simplifying complicated skills. Students not only learned a new procedure, but they also learned to monitor, check, and evaluate their understanding of the procedure. The study consisted of five consecutive days of about 45-50 minutes of lesson time provided by their regular classroom teacher.

During day one, the teacher taught students a definition of a summary and modeled how to write down important information with a think-aloud process with some student assistance. Day two consisted of a review of the previous lesson and additional practice with teacher feedback and monitoring. Then, the students progressed into two or three paragraphs with individual summaries for each paragraph and finally an overall

summary of the entire passage on day 3. On days 4 and 5, students moved into independently writing an overall summary for each section of the social studies chapter. The teacher provided feedback and monitoring.

The control group for these days followed their normal reading group work. This work was from their grade level basal of stories and worksheets. These worksheets did not focus on summarizing or finding the main idea.

Rinehart et al. (1986) found positive effects for the recall of major information. By conducting two one-way analyses of covariance (ANCOVA), Rinehart et al. found the treatment to have a significant effect. Students who received the instruction performed more competently on the posttest than students who were in the control. The researchers indicated that an explicit instructional model for summarization training allowed the students to increase the quality of their notes and to improve recall of major information.

From this study, Rinehart et al. (1986) concluded that sixth-grade students benefit from explicit instruction and that there is a need for this type of instruction to improve comprehension. Rinehart et al. pointed out that this training "may train students to be more attentive when they read, and that this greater attention in itself may lead to improved reading" (p. 433). The ability to pay more attention to the reading would provide children with more opportunities to study the author's text structure. This opportunity would assist children in understanding the author's meaning and the important points of the text.

Other researchers have focused on using explicit instruction to teach the structure strategy approach. In a quantitative study, Meyer and Poon (2001) investigated the effects of instruction focusing on text structure.

Meyer and Poon (2001) hypothesized that structure strategy training would increase total recall and memory of important information. Meyer and Poon also hypothesized that the training would increase the number of similarities between the participant's organizational recall and the actual text's organization. In addition, they predicted signaling to increase main idea and top-level recalls but not total recall. Finally, Meyer and Poon hypothesized that structure strategy training would enable a transfer of learning to other types of information found in everyday materials.

The researchers used an experimental design consisting of three training groups: structure strategy, interest-list strategy, and no training (control group) and a signaling condition (texts with and without signaling). The participants consisted of 56 young adults (21 males and 35 females) and 65 older adults (25 males and 40 females). The researchers recruited the participants by advertising in the community and each participant received a stipend of $75 for the sessions. Then they randomly assigned them to the three groups.

During the first three (of ten) training periods, participants completed pretests: vocabulary, working memory, speed, cognitive status, and comprehension. In addition, they completed questionnaires to provide information about reading and memory habits, interests, health, and background information. The researchers used this information to stratify participants and randomly assign them into the training groups.

The next six 90-minute sessions occurred over three weeks. The participants in the structure strategy-training group received training to identify and use basic top-level structures like comparison and problem/solution in order to organize their ideas. In addition, the training included recognition of these structures in everyday reading

material. Within this training, participants had to conduct a systematic memory search to organize and write or retell to a partner what they remembered in their reading. This group had a key motto, "choose it, use it, or lose it" (p. 146). During instruction, participants received feedback about their progress and explanations on why structure strategy is good to use. In contrast, the training for the interest-list strategy-group was systematic on how to evaluate their interest in an article and how to use this information to monitor and increase their motivation for reading. When participants evaluated an article to be of a low-interest to them, they had to think of friends or relatives who might be interested in the topic.

The sixth session was the posttest for both instructional groups. During this test, the participants had to apply what they had learned in their training, structure strategy or interest-list. The test consisted of two tasks: a 13-minute video about nutrition and a long magazine article about osteoporosis. Finally, each instructional group read and recalled information presented in a decision-making task about breast cancer. Meyer and Poon (2001) considered these tasks as transfer tasks to everyday reading material.

In order as measures of total recall, gist, and top-level structure, each participant had to complete four recalls and five summaries, one for each of the passages read, and four question sets about signaled main ideas within the passages. Meyer and Poon (2001) used the prose analysis system developed by Meyer (1975, 1985) to score these measures. After careful analysis, Meyer and Poon (2001) found the structure strategy group to significantly recall more information from text than the no training group or the interest-list group. The participants who received the structure strategy training utilized the instruction to effectively organize their recalls ($M = 6.86$, $SD = 1.28$). However, the

no training group ($M = 5.27$, $SD = 1.24$) and the interest-list group ($M = 5.31$, $SD = 1.15$) did not differ on their scores for organization. Further, the group of participants who received the structure strategy and signaling training outperformed the other groups in top-level scores. Finally, the transfer test resulted in significant effects for the structure strategy group in both the nutritional video and the breast cancer treatment literature. The structure strategy group recalled more ideas ($M = 50.16$, $SD = 16.68$) and organized their recalls to match the text structure ($M = 6.77$, SD = 2.14) as compared to the interest-list group in ideas ($M = 39.69$, $SD = 12.21$) and organization ($M = 4.20$, $SD = 1.75$) for the nutritional video. The breast cancer task showed similar results for the structure strategy group in recalling more ideas ($M = 22.23$, $SD = 12.58$) and overall organization of recall ($M = 7.55$, $SD = 1.78$) than compared to the interest list group for ideas ($M = 12.27$, $SD = 10.72$) and organization ($M = 4.53$, $SD = 2.19$).

Meyer and Poon's (2001) results confirmed their multiple hypothesizes. Their study revealed that adults could increase total recall, memory, and top-level structure by learning a structure strategy approach. Prior to the study, most participants appeared to comprehend text by remembering a list of ideas. However, with training most adult readers changed from using a list to using a structure strategy approach in recalling information. This research involving older readers suggests that explicit instruction of text structure may facilitate improved comprehension for expository text. However, what does research say about children learning the structure strategy?

In their 1987 study, Armbruster, Anderson, and Ostertag researched the effects of teaching students structure strategy in comparison to a more traditional reading practice. Eighty-two fifth-grade students from four heterogeneous classrooms were assigned to

either structure strategy or traditional training. Students in the structure strategy training received 11 instructional sessions on learning about problem/solution structures and how to focus on main ideas and recall the important information. Students in the traditional training used the same problem/solution material but focused on reading and answering questions. Overall students in the structure strategy outperformed the other students on recall as measured by written summaries.

By using an explicit instructional model, researchers found positive effects to improving reading comprehension skills (Baumann, 1984; Rinehart et al., 1986). Results across studies suggest that effective comprehension instruction should begin with a systematic form of teacher explanation and mental modeling of the skill or strategy to be learned by students (Baumann, 1984; Pearson & Dole, 1987; Roehler & Duffy, 1984). Meyer and Poon (2001) and Armbruster et al. (1987) demonstrated that teachers could use explicit instruction to teach the structure strategy to adults and children, although students with low reading skills were less likely to learn the structure strategy.

Scaffolded Instruction

In the previous sections, I framed reading comprehension within an interactive learning environment and linked it to explicit instruction. As Vygotsky (1978) and many other researchers (Baumann, 1984; Bransford, Brown, & Cocking, 2000; Meyer & Poon, 2001; Palincsar & Brown, 1984) made clear, it is important to situate reading comprehension within a social context. Within that social context, research indicates promising results to include scaffolding as an instructional strategy. Therefore, in this section I present research that recognizes the importance of scaffolded instruction.

In their 1976 study, Wood, Bruner, and Ross (1976) examined teaching tasks in a tutorial setting. The researchers investigated the notion of a scaffolding process. This process is an intervention that includes more than modeling and imitation. According to Wood et al., scaffolding enables "a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts" (p. 90).

Participants included thirty-three 3, 4, and 5 year old children. The children were divided equally into girls and boys within each age group. Wood et al. (1976) designed a specific performance task, a wooden block pyramid, with several objectives in mind. The task had to be fun, multifaceted, within easy reach of a child's skill, and yielding continuing knowledge.

The tutoring procedure followed a set of prescriptions, which the tutor used to meet the needs of the individual child. At the beginning of the each tutoring session, a child was seated at a small table with 21 wooden blocks spread out in front of him or her. The child had no idea that the blocks would be a pyramid when put together correctly. Each child was given a few minutes to manipulate the blocks and become familiar with the situation. Then, the tutor took two blocks and modeled for the child how to create a connected pair. If the child created another connected pair independently, the tutor would ask if the child could make more like that.

During the session, the researcher focused on three types of child responses. One response, ignoring, caused the tutor to present the model again. The second type of response was if a child tried to manipulate the blocks but overlooked an aspect. In this case, the tutor would verbally draw attention to the overlooked aspect. The third type of response occurred because of an error from the tutor. If this happened, the tutor would

correct the error. The researchers noted that each child was given many opportunities to complete tasks independently and the tutor only intervened when the child stopped constructing or had difficulty.

Wood et al. (1976) conducted multiple observations. During the observations, the researchers noted either assisted or unassisted manipulation of blocks. In addition, Wood et al. noted each intervention by the tutor. The tutor intervened with direct assistance, verbal prompt, or a straightforward verbal attempt to get the child to attempt more constructions.

By analyzing the observational data, the researchers concluded that effective tutoring and instruction depended upon two features. First, the tutor must fully understand the task to be completed by the child. Second, the tutor needs to understand the cognitive developments of the child. Further, Wood et al. (1976) noted that the features do not stand-alone; there must be an interaction between the two for effective instruction.

In addition, Wood et al. (1976) theorized about the function of scaffolded instruction. The researchers noted important functions of scaffolded instruction. Those six functions are recruitment, reduction in degrees of freedom, direct maintenance, marking critical features, frustration control, and demonstration. First, the teacher must recruit the student to become interested in and follow the requirements of the task. Then, the teacher reduce the number of times required for the student to complete the task independently. Next, it is important for the teacher to keep the student focused on the task and make note of any discrepancies between what has been produced and the correct production. In addition, Wood et al. noted that a student should feel some frustration

during the task. Finally, the teacher must demonstrate or model by imitating an attempted

solution so that the student will imitate it back. In essence, scaffolded instruction is the

balance between appraising a student's performance and adapting instructional responses

in order to develop the student's autonomy (Beed, Hawkins, & Roller, 1991).

     Other research in using scaffolded instruction has shown promising results. As I

discussed earlier, Palincsar and Brown (1984) investigated the reciprocal teaching of four

comprehension-monitoring strategies. The researchers found that students could learn and

independently apply cognitive reading strategies that would enhance reading

comprehension. Palincsar and Brown's positive results can be partly attributed to their

use of scaffolded instruction within their design. Palincsar and Brown included a high

level of teacher modeling and explanation at the beginning. Then, the teachers began to

relinquish control when students were capable of negotiating the text. As the novice

reader became more competent, the teacher relinquished more control until an

independent level was achieved by the students. Thus, the researchers' use of scaffolded

instruction assisted students in becoming independent learners and improving reading

comprehension.

     It is important to note that a Vygotskian perspective on scaffolded instruction is

vital in understanding how children learn cognitive reading processes (Almasi et al.,

2001). Vygotsky believed a knowledgeable other could assist students in developing

higher cognitive functions. By having a knowledgeable other assist a child, learning and

instruction operate in the zone of proximal development as discussed in Chapter 1.

Researchers believe that the knowledgeable other or teacher plays a key role in

developing appropriate scaffolded instruction and creating independent readers (Beed et al., 1991; Almasi et al., 2001; Pressley et al., 1992).

<div align="center">*Research Supported Instruction*</div>

Three of the instructional strategies in explicit instruction interventions have received research attention in their own right: modeling, thinking aloud, and graphic organizers. The purpose of this section is to discuss research that supports using each of these strategies as part of explicit instruction.

Physical and Mental Processes of Learning

As I discussed in Chapter 1, modeling and thinking aloud are important components of the explicit instructional intervention. Bandura (1977) recognized that students learn best when behaviors are modeled. In order to model and learn behaviors, skills, or strategies, a "high-status" model such as a teacher should provide students with the processes necessary for learning, attention, retention, and reproduction (Bandura, 1977). Pearson and Dole (1987) indicated that learning occurs when a teacher emphasizes a behavior, skill, or strategy, adds thinking aloud to instruction, and provides time to practice the modeled behavior, skill, or strategy.

Duffy, Roehler, and Herrmann (1988) noted, "modeling is what a teacher does to show novice readers how to do something they do not know how to do" (p. 762). Novice readers are able to see their teachers playing an active role in the learning process (Roehler & Duffy, 1984). Teachers can model both the physical aspects of learning and the mental processes of how one uses a skill or strategy (Duffy et al., 1988). The following section discusses modeling and thinking aloud as a recommended instructional technique.

Duffy et al. (1987) investigated the affects of modeling the mental processes of reading (thinking aloud). The authors hypothesized that low-ability students whose teachers emphasized mental processing would "be more aware of lesson content, more aware of what good readers do to make sense of text, and more likely to use strategic reasoning while reading, and that these students would thus score higher on measures of reading achievement" (Duffy et al., 1987, p. 352).

Nineteen third-grade teachers from an urban district, one third-grade suburban teacher from a neighboring district, and their low-ability students participated in this study. Each teacher was randomly assigned to either the treatment or treated-control conditions. Duffy et al. (1987) reported that the low groups appeared to be equal in awareness and achievement according to pretest measures. These students represented typical reading difficulties and the groups included special education students, immigrant children, and students with behavioral disorders.

All classrooms used the prescribed reading basal for the district to deliver instruction. The emphasis in the treatment classrooms was on the mental processes good readers use when strategically using a skill rather than on performance. The instruction included the treatment teachers recasting a basal skill as a problem-solving strategy and modeling the cognitive and metacognitive acts involved with using the strategy. The modeling portion of the lesson entailed the teacher using direct explanations about a strategy, when to use it, and how to use mental processing. In contrast, the control teachers followed the prescribed basal instruction.

In order to obtain data about teacher explanation and student awareness, the researchers conducted six observations scheduled at one-month intervals. Each

observation consisted of field notes, completion of forms to note teachers' use of explanation, and notes on student engagement and activity flow. Duffy et al. (1987) conducted interviews with five students immediately after each observation. In addition, various measures including nontraditional and a standardized measure comprised the final instruments.

Duffy et al. (1987) found the treatment condition ($M = 17.70$, $SD = 6.89$) to have significantly higher teacher explanation ratings using all six observations than the control condition ($M = 9.10$, $SD = 3.44$). The low-ability students developed more awareness in using skills strategically when teachers provided instruction that included direct explanations and mental processes as measured by post-lesson interviews with the students. However, the student achievement measures revealed mixed results. Surprisingly, the standardized measure, reading subtest of the Stanford Achievement Test, indicated the treatment students ($M = 595.19$, $SD = 17.74$) only scored significantly higher on the word study test compared to the control group ($M = 568.74$, $SD = 14.73$). The comprehension subtest resulted in similar scores between the two conditions.

This study revealed that low-ability students could increase strategic awareness when teachers deliver explicit explanations by modeling their mental processes. In addition, the low-ability students increased their achievement on one subtest of a standardized measure. These findings suggested the impact that explicit explanations and modeling can have on low-ability students' reading awareness and achievement.

Bereiter and Bird (1985) investigated the affects of using think alouds as an instructional strategy. Eighty seventh and eighth-grade randomly assigned students

participated in this study. These students were average to above in oral reading and average in silent reading.

Through a pretest and posttest design, Bereiter and Bird (1985) developed three experimental conditions and one control. The modeling plus instruction condition consisted of explanation with thinking aloud, examples, and time for the students to practice strategies through identification and oral practice. The next condition, modeling only, involved the teacher thinking aloud while reading and providing oral practice for the students. In the exercise condition, teachers used oral and written exercises including follow-up discussion. The control condition involved the students remaining in their regular classes for instruction.

Bereiter and Bird (1985) found significantly higher scores for the modeling plus instruction condition ($M = 14.56$, $SD = 2.65$) on the oral and silent comprehension measures as compared to the other three conditions: modeling only ($M = 11.47$, $SD = 2.76$), exercise condition ($M = 12.38$, $SD = 3.34$), and control ($M = 11.24$, $SD = 2.59$). This study indicates that modeling and thinking aloud are valuable techniques for demonstrating, practicing, and using reading strategies.

Duffy et al. (1987) noted that an important component of reading instruction is the use of explicit teacher explanation of reading strategies. Bereiter and Bird (1985) found that students benefit from reading instruction that incorporates both modeling and thinking aloud. Further, research suggests that modeling and thinking aloud are effective methods for teachers to demonstrate and verbally explain their thinking processes (Dole, Duffy, Roehler, & Pearson, 1991; Duffy et al., 1988; Duke, 2004; Methe & Hintze, 2003; NRP, 2000; Pressley et al., 1992).

Graphic Organizers

Graphic organizers are diagrams used to depict the relationship between the ideas presented by the author (Chambliss & Calfee, 1998). These organizers are retrieval guides that are necessary to understand the author's message and improve comprehension Meyer (1985) noted that a student's ability to organize the author's information into a visual organization, gives the reader the advantage in remembering the important concepts.

In a meta-analysis, Moore and Readence (1980) found that a vast majority of graphic organizer research examined sixth-grade students and older (Alvermann, Boothby, & Wolfe, 1984; Berkowitz, 1986; Simmons, Griffin, & Kameenui, 1988). In order to address the issue of younger students and their ability to comprehend expository text using graphic organizers, Boothby and Alvermann (1984) conducted a study to investigate graphic organizer instruction at the elementary level. Boothby and Alvermann designed their study to examine three research foci: the benefits from graphic organizer instruction, the use of graphic organizers as a signaling device for main ideas, and the effects of having a graphic organizer on the immediate and delayed recall of the number of main idea units.

The participants were 38 fourth-graders from two classrooms located in a small, mid-western elementary school. These students were predominantly from a middle-class background with only a small percentage of participants representing minority ethnic groups. Students participated in their intact classrooms. The experimental class had 18 students and the control class had 20 students. Boothby and Alvermann (1984) noted that

the classrooms appeared similar on their reading subtest score. The mean grade equivalent for the experimental class was 5.4 compared to 5.0 for the control.

The instructional materials consisted of three practice passages from three different chapters in the social studies textbook. These chapters were part of the school's adopted fourth-grade social studies text and were part of the sequence for the regular fourth-grade social studies curriculum. The researchers prepared an experimental passage by revising a passage from an informational library book. The topic of this passage was about tobacco trade between the Colonies and England.

In addition to the instructional passages, the researchers created graphic organizers for each chapter, each passage within the chapter, and the experimental passage. These organizers reflected a comparison/contrast top-level structure or a cause/effect top-level structure based upon Meyer's (1975, 1985) top-level structures. The completion of these organizers included key vocabulary terms and empty slots. The empty slots represented missing information that students could find in the passage, and students completed the empty slots after reading a selected passage.

Measurements for Boothby and Alvermann's (1984) study consisted of multiple-choice tests for each chapter and written free recalls. The tests were used to assess the students' comprehension of material covered over the entire length of the chapter. The recalls assessed their ability to comprehend and retain passage material.

During the instructional period, the fourth-graders received 40-minutes of social studies instruction over 13 consecutive weeks. Each week, students had social studies instruction three times per week. Due to scheduling constraints, the primary researcher

and the regular classroom teacher provided the instruction. Boothby and Alvermann (1984) noted this as a limitation having one of the researchers providing the instruction.

The first experimental session consisted of the teacher describing to the students a method that will help them read and study social studies information. Then, the teacher introduced the graphic organizer and explained the top-level structure in terms the fourth-graders could understand. The students were encouraged to predict vocabulary words that would replace the empty slots on the graphic organizer prior to reading a portion of the chapter. Then, the students read the passage to verify these predictions. Finally, the students completed the graphic organizer. The graphic organizer "served as a visual reminder of how key vocabulary terms were related and provided a focus for class discussion of the material just read" (Boothby & Alvermann, 1984, p. 330).

During the next session, students reviewed the graphic organizer and the important ideas presented within the organizer. Then, the teacher either added on to the original graphic organizer or presented a new one to the class depending upon the topic of the chapter. Sessions continued in this format until the students reached the chosen practice passage.

For each practice passage, teachers instructed the students to read and complete the missing information on the appropriate graphic organizer. When all students completed this task, students had time to stretch and get paper and pencil ready for the written immediate recall measure. Then, the fourth-graders had to write everything they could remember from what they just read. This task resembled a normal school task for the participants in this study because they had to complete some type of expository

writing on a daily basis. The final task for each chapter was for the students to take a multiple-choice test. This test allowed the teachers to observe progress for each student.

A few aspects remained the same between the experimental and control groups such as reading the same material, writing free recalls, and taking multiple-choice tests. However, the instructional procedures for the control classroom were different from the experimental classroom. The control classroom instruction was similar to a directed reading activity. During this instruction, the teacher motivated the students and introduced new vocabulary, students read small parts of a chapter silently, and the teacher led a discussion based on the reading of the passage. Finally, the students completed follow-up activities, which consisted of worksheets, class projects, related media, and/or library books.

A post-training procedure occurred one week after the instructional sessions ended. Both the experimental and the control classroom read the same experimental passage about tobacco trading. The experimental group received the passage and the appropriate graphic organizer. When all experimental students completed the reading of the passage, they had a stretch break before beginning to write. Then, the teacher instructed the students to write everything they could remember from the reading and set no time limit.

In contrast, the teacher in the control classroom informed the students about the test and introduced them to the experimental passage. These students read the passage until they felt comfortable with the material. The process for the written free recall was the same as the experimental group. All experimental and control students finished the

recall within 30 minutes. Two independent judges who were looking for important level idea units scored the students' tobacco recall. The judges had 98% accuracy.

In conclusion, Boothby and Alvermann's (1984) study indicated that fourth-grade students appeared to benefit from graphic organizer instruction. Results indicated that the experimental group recalled a greater number of total idea units ($M = 8.09$, $SD = 2.55$) as compared to the control group (M = 5.00, $SD = 3.16$). In addition, the researchers conducted an analysis of variance for group and time and found significant main effects for group, F (1, 24) = 5.79, $p < .05$.

These findings are especially important for elementary teachers who face the challenge of having younger students read and comprehend expository text such as a social studies textbook. Boothby and Alvermann (1984) designed instruction that enabled the teacher to introduce the graphic organizer to the fourth-graders prior to reading a portion of the chapter. Consequently, the students understood that the graphic organizer was something that would help organize the content within the chapter. In addition, the teacher explained the selected reading's top-level structure in terms they could understand. For example, the teacher described a cause and effect structure as, "What happened to make the next thing happen?" (p. 330). This explicit instruction assisted the experimental students in recalling more total idea units in the written recalls as compared to the control students.

More recently, Griffin and Malone (1995) examined how graphic organizers assist students in comprehending expository text and how much explicit instruction is necessary for students to construct and use a graphic organizer. They designed their experiment to use a graphic organizer during post-reading instruction, and students

participated in the construction of the organizer. Three homogenously grouped fifth-

grade classes (n = 61) from one school and two homogeneously grouped fifth-grade

classes (n = 38) from another school were participants. Griffin and Malone chose these

students based on a multitude of factors: 40% or less correct on an experimenter designed

pretest, reading scores between the fourth and ninth stanines on the Comprehensive Test

of Basic Skills, and no received special education services.

Each classroom used the same social studies passages from a district-adopted text.

The researchers constructed nine graphic organizers, which matched the hierarchical

information presented in the passages. The purpose for the graphic organizers was to

highlight only the important information.

Griffin and Malone's (1995) study consisted of five treatment conditions: explicit

graphic organizer instruction, just explicit instruction, implicit graphic organizer

instruction, just implicit instruction, and basal instruction acting as the control group.

Participants were randomly assigned to one of the treatment conditions. Each

experimental classroom received specialized instruction designed by Griffin and Malone.

Participants in the explicit graphic organizer instruction received instruction on

how to identify important information through the structure of the text and how to

construct their own organizers by learning about specific features. The other explicit

instruction group received similar instruction with the exception of the absence of

learning how to construct a graphic organizer. In contrast, the implicit graphic organizer

instruction provided students with instruction based on the investigator demonstrating

graphic organizer construction by using investigator-prepared examples. The participants

in the implicit instruction only group received similar instruction but did not use graphic

organizers. These students were provided with time to study the ideas instead of time to construct a graphic organizer. Finally, the traditional basal instruction received instruction based on the teacher's manual.

In order for Griffin and Malone (1995) to assess comprehension, retention, and transfer of content, they administered immediate and delayed recall tests and a transfer test. The researchers conducted a one-way, between groups multivariate analysis of variance (MANOVA) to analyze those measurements.

Griffin and Malone (1995) found the explicit graphic organizer instruction group to score higher on the immediate (M = 12.45, SD = 5.52) and delayed (M = 9.40, SD = 4.957) posttests than the explicit no graphic organizer instruction, immediate (M = 10.18, SD = 4.24) and delayed (M = 8.48, SD = 5.17) posttests, the implicit graphic organizer instruction, immediate (M = 11.35, SD = 4.25) and delayed (M = 8.00, SD = 3.18) posttests, and the implicit no graphic organizer instruction, immediate (M = 12.29, SD = 5.05) and delayed (M = 10.14, SD = 5.85) posttests. Finally, the traditional instruction revealed a similar pattern with lower scores on the immediate (M = 9.11, SD = 3.69) and delayed (M = 8.65, SD = 3.06) posttests. This finding revealed that graphic organizer instruction provided students with added support for learning expository text content. The students had the opportunity to become aware of the overall text structure.

However, the differences between the immediate means are trivial, and the implicit no graphic organizer group scored higher on the delayed test than the explicit graphic organizer group. Griffin and Malone (1995) noted a possible explanation for these findings. The participants in the explicit no graphic organizer, implicit no graphic organizer, and traditional groups were provided with study time after each instructional

session. The researchers observed these participants rehearsing the information silently to themselves. In contrast, the explicit graphic organizer group had the greatest number of demands placed upon their instruction with no study time. Thus, study time may have allowed the other students to engage in a deeper understanding of the information. Griffin and Malone concluded that an important factor in the design of graphic organizer instruction should include an instructional adjunct such as summarization, verbal rehearsal, or explicit instruction.

In conclusion, teaching students to use graphic organizers is an important instructional strategy because it assists readers in organizing important information comprehended from the text. By using this strategy, Griffin and Malone (1995) found that fifth-grade students could effectively learn content when they received explicit graphic organizer instruction. In addition, the researchers noted that fifth-grade students were able to comprehend expository text when given instruction based on text structure. Other research has indicated similar findings about the efficacy of graphic organizers to assist elementary students to comprehend expository text (Alvermann et al., 1984; Armbruster, Anderson, & Meyer, 1991).

Summary

Educators and researchers often note the difficulty students have in comprehending and recalling information from expository text (Chall, Jacobs, & Baldwin, 1996; Duke, 2004; Spiro & Taylor, 1980; Taylor, 1982). However, expository text plays a major role in teaching content throughout education and for lifelong learning (Duke, 2004; Durkin, 1993; Allington & Strange, 1980). In order to comprehend expository text, readers should know and use a set of text structure schemata, the

structure strategy (Chambliss, 1995; Chambliss & Murphy, 2002; Meyer, 1985; Meyer et al., 1980). The structure strategy enables readers to search for main ideas and important details (Chambliss, 1995). However, most children do not know or use such a structure strategy approach when reading and comprehending expository text, especially younger children (Chambliss & Murphy, 2002; Cote et al., 1998; Kucan & Beck, 1996; McGee, 1982).

In addition, expository text instruction should include reading comprehension embedded in an interactive learning environment. An interactive learning environment creates instruction that focuses on the student's zone of proximal development. The zone of proximal development allows students to learn higher levels of cognitive processing (Vygotsky, 1978), which positively affects reading comprehension (Almasi, 1995; Almasi et al., 2001; Palincsar & Brown, 1984; Wiencek & O'Flahavan, 1994). Further, explicit instruction that includes scaffolding would allow students to develop comprehension strategies that would assist them in understanding expository text (Armbruster & Armstrong, 1992; Baumann, 1984; Meyer & Poon, 2001; NRP, 2000; RAND Reading Study Group, 2002; Rinehart et al., 1986; Wood et al., 1976). Based on past research, I designed an explicit instructional intervention embedded in an interactive learning environment. The purpose of my study was to use an expository text intervention that incorporated multiple strategies to teach text structure schemata to third-grade students.

Modeling and thinking aloud have been demonstrated to be effective instructional strategies (Bandura, 1977; Duffy et al., 1987; Methe & Hintze, 2003). Graphic organizers have also shown to be an important strategy for readers to organize ideas presented by an

author (Armbruster et al., 1991; Berkowitz, 1986; Chambliss & Calfee, 1998; Boothby & Alvermann, 1984; Griffin & Malone, 1995). However, these reading strategies have not been previously integrated and studied together in a collaborative environment to assist third-grade students in comprehending expository text. Thus, the purpose of this study was to connect the theory on how readers comprehend expository text with research that describes effective comprehension strategies in order to design an instructional expository text paradigm. Chapter 3 describes the research methods used to investigate explicit instruction incorporating graphic organizers on the ability of third-grade students to comprehend expository text.

CHAPTER THREE

Methods

The purpose of this study was to examine the effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of three classrooms of third-grade students in comparison to a control classroom. Specifically, I created two overall questions with subsidiary questions that express how I measured comprehension:

1. How do the teacher-student interactions differ between the intervention classrooms and the traditional Guided Reading classroom?

    a. How do the intervention teachers scaffold expository text comprehension?

    b. What is the ratio between teacher/student responsibility over time for the two types of instruction, explicit incorporating graphic organizers and Guided Reading?

2. How effective is explicit instruction of expository text structure incorporating graphic organizers in comparison to traditional Guided Reading in developing comprehension of expository text as measured by written summaries with third-grade students of various reading levels?

    a. How does explicit instruction of expository text affect how third-grade students represent text structure graphically?

b. How does explicit instruction of expository text affect how

third-grade students use their graphic organizers to compose a

written summary?

c. How does explicit instruction of expository text affect how

accurately third-grade students summarize expository text?

Design

This study contained both quantitative and qualitative components. For

quantitative analysis, I used a pretest-posttest control group design (Campbell & Stanley,

1963). The independent variables were time (pretest, posttest 1, and posttest 2), gender,

and instructional group (explicit instruction and Guided Reading). The dependent

variables consisted of scores for the summaries and graphic organizers. For qualitative

analysis, I conducted classrooms observations and the teachers and assistants audiotaped

lessons.

Time Frame

This study began the fourth week of October and ended the third week of

December. The study began with a 6-day pretest cycle. Then, the instructional time

consisted of 24 days, which included four, six-day cycles. Each daily lesson within the

scheduled intervention period was 20 minutes in length. The study concluded with two 3-

day posttests.

I chose a 24-day instructional time because research suggested that it takes many

lessons for teachers to help students understand different reading strategies (Duffy &

Roehler, 1989). For example, Brown, Dole and Trathen (1990) found a four-week model

to be sufficient time for students to transfer learning of a new reading strategy. In

addition, I was able to see gains from the pre-test to post-test over only a 12-day instructional period in my pilot study, which was conducted in February and March of 2005 (See Appendix B).

Participants and Setting

The district in which the study occurred was located in the Mid-Atlantic region of the United States. I chose this district because I had a previous working relationship with the elementary school. I worked in this district for five years as a Reading Specialist before leaving for my present position.

In this particular elementary school, there were seven, third-grade classrooms ranging in class size from 19-23 students. One classroom was high average with students reading slightly above grade level. A second classroom contained Learning Support students with Individualized Education Plans. These classrooms did not participate in this study. The remaining five classrooms contained students with mixed abilities. The principal grouped these students heterogeneously before the start of the school year.

Four of the five remaining third-grade classrooms consisted of four individual classroom teachers and two teaching assistants who were open to my instructional design and volunteered to be part of my study. Each teacher and assistant signed a consent form (See Appendix C). All information was kept confidential. The four teachers and two teaching assistants had an open and honest relationship with me because for the past five years I had worked in their building as a Reading Specialist. The teachers and I worked together on a daily basis helping to instruct the struggling readers in third-grade. I no longer work for this school district because of a career change.

The teachers and assistants varied in their years of total teaching experience and third-grade teaching experience. One teacher, Danielle, had been teaching for a total of 25 years with 10 of those years in third-grade. Another teacher, Sue, had been in education for 32 years with 13 of those years in third-grade. The third teacher, Kelly, had been teaching for six years with all six years in third-grade. The final classroom teacher, Lisa, had taught for 20 years with 17 years in third-grade. In addition, one teaching assistant, Holly, spent her day traveling between various third-grade classrooms delivering instruction to small groups during Guided Reading time. This assistant had been with the district and worked in third-grade for six years. The second teaching assistant, Cathy, had been with the district for 14 years and spent her day traveling to various grade levels for Guided Reading.

Based on the Guided Reading schedule that was developed by the principal, I decided to have one teaching assistant deliver the intervention instruction to all three intervention classrooms. The principal assigned Holly to Danielle, Sue, and Kelly's classrooms. The principal assigned Cathy to Lisa's room. I was able to deter any carry-over effect from intervention to control instruction by assigning Danielle, Sue, and Kelly as the intervention classrooms and Lisa as the control (Armbruster, Anderson, & Meyer, 1991).

Eighty-four third-grade students participated in this study. The three intervention classrooms consisted of 62 students. The one control classroom consisted of 22 students. During the middle of the study, two students from the intervention classrooms were unable to complete the posttests because they moved, and I eliminated their data. All information was kept confidential and each student signed an assent form (See Appendix

C). In addition, each student's parent or guardian signed a parental permission form (See Appendix C).

Each classroom consisted of students considered high (mid-third grade and above reading level), middle (beginning third-grade reading level), or low (late-second grade or lower reading level) readers. For the purposes of Guided Reading, the normal procedure in this particular elementary school and the procedure for this study was that each teacher placed the students into one of four homogeneous reading groups at the beginning of the school year. The homogenous groups consisted of one high, two middle, and one low group. Approximately six students were in each group. These groups experienced some fluctuation with students moving into a higher or lower group based on informal evaluations by the classroom teacher throughout the year. However, for the course of my study, all groups remained intact from the beginning to the end of the study.

The teachers adhered to certain criteria when placing students into homogenous groups for Guided Reading. The teachers based their placement on the student's Guided Reading level at the end of second grade, the *DIBELS* test of oral fluency (Good & Kaminski, 2002), and *Words Their Way Elementary Spelling Inventory* (Bear, Inverrizzi, Templeton, & Johnson, 2004). The student's Guided Reading level at the end of second grade was determined by his or her final second-grade instructional reading level. The *DIBELS* oral fluency test required each third-grade student to read three different reading passages. Each student was assessed on the number of correct words he or she could read in one minute for each passage. Then, the teachers calculated a median score for all three passages. The *Words Their Way Elementary Spelling Inventory* consisted of 25 words that each third-grade student were asked to spell. Each student was given a total score

based on the feature points (vowel and consonant patterns) correctly spelled within each word and the total number of words spelled correctly.

Although the intervention and control classrooms' population was primarily Caucasian, comparable to the rest of the district, these classrooms also consisted of African American, Hispanic, and Filipino sub-groups as well as a Title I population. Table 1 represents specific demographic information, including gender, for the intervention classrooms and control classroom as provided by each classroom teacher.

Table 1

Demographic Information for Each Treatment Classroom and Control Classroom

	Danielle	Sue	Kelly	Lisa (control)
Gender				
Males	11	11	12	10
Females	10	10	8	12
Title I	5	10	6	5
Caucasian	17	19	18	19
African American	1	1	2	0
Hispanic	1	1	0	1
Filipino	2	0	0	2

Materials

This particular elementary school's reading program was called *Rigby Literacy Series* by Harcourt Achieve (2002). Within this program, all third-grade teachers utilized the Guided Reading collection of narrative and expository texts. The expository books represented a variety of topics and each text was about 24 pages in length divided into three to eight sub-sections. The expository texts were the focus of this study. Choosing expository texts from a single publisher and series contributed toward controlling for random variance across text. The publisher of this series strived for consistency in sentence length and text design. Each text and author is noted in Table 2.

Table 2

Third-Grade Rigby Expository Texts and Author

Level/Title	Author
Level 16	
Count on Your Body	Kurt Baze
A View from Above	Glenn Norris and Diane Cox
Paper Crunch	Karen Rogers and JoAnne Alexander
Level 17	
Bugs on the Menu	Jo Windsor
Towers	Pamela Rushby
Jane Goodall: Living with	
the Chimpanzees	Annie Ortiz and Denise Ferrell

Table 2 (continued)

Level/Title	Author
A Trip Through the Airport	Andrea Rains
Lizards and Snakes	Rod Theodorou and Carole Telford
New Clues About Dinosaurs	Holly Hartman
Ostriches	Jo Windsor
Using the River	Claire Llewellyn
Level 18	
Perfect Paper	Robin Kearney
Horses of the Sea	Carol Hosking
Moon Journal	Karen Rogers and Diane Cox
Pathfinder: Mission to Mars	Karen Rogers
Level 19	
The Arctic Food Web	Keith Pigdon and Marilyn Woolley
Pueblo Ruins	Laura Husar
Artful Stories	Jude Tolar
Chasing Tornadoes	Michael McGuffee and Kelly Burley
Level 20	
Antarctica: The Last Great Wilderness	Coral Tulloch
Connecting to the Internet	Chris Mosner

The *Rigby Literacy Series* divided the Guided Reading third-grade texts into five levels (16-20). The leveled texts in this series were based upon specific text characteristics using guidelines from Joetta Beaver and her work in developing a reading assessment. The levels progressed in difficulty determined by word frequency, sentence length, and sentence complexity. At each level, the word count continued to rise from approximately 800 at level 16 to 1250 at level 20 (Rigby, 2004). Further, as texts increased in difficulty, graphic elements also become more complex.

The first level (16) consisted of three texts used at the beginning of third-grade. These texts were used to review skills and strategies from second-grade. The next three levels (17-19) represented the main third-grade texts. There were 16 expository texts within these three levels. These texts were used during the majority of the year to learn, practice, and refine third-grade reading and comprehension skills. The last level (20) consisted of two expository texts that represented transition books into fourth-grade reading material.

In this study, the determination of different expository texts chosen for the four intervention cycles occurred before the beginning of each instructional cycle and Post 2. The teacher chose texts that matched each group's instructional level at that particular time of the study. For example, Sue chose the text, *Towers,* for the average group to read during Cycle 3.

Text analysis. Based on my pilot study and further analysis thereafter, I analyzed each expository text included as part of the third-grade Guided Reading texts. I determined that the texts represented description, sequential, or explanation rhetorical patterns as described by Chambliss and Calfee (1998). A topical net, matrix, or linear

string graphic organizer as described by Chambliss and Calfee (1998) visually represented the ideas from the Rigby expository texts. Table 3 presents the classification of each Guided Reading text in relation to text structure and graphic organizer. I developed an expository text model based on Chambliss and Calfee's (1998) taxonomy for visually representing ideas presented within a text (See Appendix A).

Table 3

Text Structure and Graphic Organizer for Each Third-Grade Rigby Expository Text

Text	Text Structure	Graphic Organizer
Level 16		
Count on Your Body	Explanation	Topical Net
A View from Above	Explanation	Topical Net
Paper Crunch	Explanation	Topical Net
Level 17		
Bugs on the Menu	Description	Topical Net
Towers	Explanation	Topical Net
Jane Goodall: Living with the Chimpanzees	Sequence	Linear String
A Trip Through the Airport	Explanation	Linear String
Lizards and Snakes	Description	Matrix
New Clues about Dinosaurs	Description	Matrix
Ostriches	Description	Topical Net
Using the River	Description	Topical Net

Table 3 (continued)

Text	Text Structure	Graphic Organizer
Level 18		
Perfect Paper	Description	Topical Net
Horses of the Sea	Description	Topical Net
Moon Journal	Explanation	Linear String
Pathfinder: Mission to Mars	Sequence	Linear String
Level 19		
The Arctic Food Web	Description	Matrix
Pueblo Ruins	Description	Topical Net
Artful Stories	Description	Topical Net
Chasing Tornadoes	Sequence	Linear String
Level 20		
Antarctica: The Last		
Wilderness	Description	Topical Net
Connecting to the Internet	Explanation	Topical Net

Interrater reliability for text analysis. In order to determine if the classification of each Guided Reading book in relation to text structure and graphic organizer was accurate, I asked an expert rater trained in the Chambliss and Calfee (1998) model to analyze the texts. This rater examined each text for text structure and created a graphic organizer according to the model. Only one of the expert rater's text structures and one

graphic organizer did not match mine. The expert rater and I reached agreement on those discrepancies through discussion. On the remaining 20 texts, we reached 100% initial agreement.

Measures

   Pretest. All participants took a pretest during the first six-day cycle. Each Guided Reading group read either *Paper Crunch* or *Count on Your Body*. These two expository texts had a clearly identifiable top-level structure, explanation, and graphic organizer, topical net. Each text was on a third-grade reading level as indicated by the Rigby level (*Paper Crunch*, level 16 and *Count on Your Body*, level 16). In addition, *Paper Crunch* and *Count on Your Body* were similar in page length. Each text was 24 pages in length.

   The pretest texts were counterbalanced with the first posttest and were randomly assigned to the participants for the pretest only. For example, a student read *Paper Crunch* for the pretest and then read *Count on Your Body* for the first posttest. I kept a log to track the text each student read for the pretest in order to assure a different posttest expository text.

   The pretest involved the students reading either *Paper Crunch* or *Count on Your Body* with support from the teacher or assistant. During the final two days of the cycle, the teacher and assistant told the students to create a web organizer and write a summary about the text. The teacher and assistant reminded the students that it could be easier to write a summary by using a web organizer as described by their 2nd grade teachers. I chose to use the term "web" instead of "topical net" because in this particular district, the 2nd grade teachers utilized web organizers during the brainstorming process of writing. Therefore, this type of organizer was familiar to most of the students in the intervention

and control classrooms. For the purposes of this study, the term "web" was only used as language during the pretest for the intervention classrooms. Thereafter, intervention teachers and students referred to a graphic organizer by using the correct term, topical net, matrix, or linear string. I collected the organizers and summaries to analyze for text structure knowledge and comprehension based on the rubric system noted in the data analysis section.

Posttests. All participants completed two posttests. During the first three-day posttest cycle (Cycle 6), the first posttest (Post 1) involved the students reading either *Paper Crunch* or *Count on Your Body* with support from the teacher or assistant. After reading either text on Day 1 of this cycle, the intervention teachers and assistant instructed the students to construct an appropriate graphic organizer and write a summary of the text with assistance from their graphic organizer. The control teacher and assistant instructed the students to create a "web" and then use the "web" to write a summary. The instructions in the control classroom were similar to the language used during the Pretest cycle. During the final two days of this cycle, the students completed their graphic organizers and summaries.

The second posttest (Post 2) occurred during the second three-day posttest cycle (Cycle 7). Day 1 involved the students reading a different expository text with support from the teacher or assistant. The classroom teacher chose this instructional level expository text. This instructional level for the Post 2 test matched the highest reading level that each group attained during the intervention period for both the intervention and control classrooms. I included a second posttest that used an instructional level text so that I could "avoid handicapping the less skilled readers with an inequitably difficult

passage" which may have caused decoding problems (Taylor, 1980, p. 403). The remainder of this cycle involved the same activities as in the first three-day posttest cycle (Cycle 6) with students independently creating graphic organizers or "webs" (for the control classroom) and writing summaries. I collected the graphic organizers and summaries to analyze for text structure knowledge and comprehension. Analysis was the same as the pretest analysis.

Observations. On day 4 of cycles 2 and 3, I observed each teacher and assistant during the instructional period to obtain descriptive field notes. These field notes ensured proper delivery of the intervention instruction or treatment fidelity (Gall, Borg, & Gall, 1996). For example, how many times did the intervention teacher and assistant refer to text structure and how many times did the intervention teacher and assistant use modeling and thinking aloud to construct a graphic organizer or write a summary? In addition, I observed the control classroom teacher and assistant to verify that instructional techniques differed between the intervention classrooms and control classroom (instructional fidelity). I took notes by using an observation form (see Appendix D) and audiotaped the observations.

Audiotapes. On day 5 of cycles 2, 3, 4, and 5, each teacher and assistant audiotaped their lessons. The purpose of the audiotapes was to obtain descriptive data regarding the intervention and control instruction. The transcribed lessons revealed the differences between teacher/student responsibility over time for the intervention and control instruction. The transcriptions revealed how the intervention teachers scaffolded expository text comprehension while the control instruction remained constant throughout this study.

Procedures

In this particular elementary school, each third-grade teacher had a 90-minute language arts block. During this time, students were involved in Shared Reading, Guided Reading, Spelling, English, Writing, and center activities. The teacher determined this block of time based on her daily schedule. A required portion of that block of time included a 40-minute block for small-group instruction called Guided Reading by the school system. This 40-minute block was divided into two 20-minute sessions. Both the classroom teacher and the teaching assistant worked with a group of students for the first 20-minutes while the other students completed center activities. During the next 20-minute session, those students involved in instruction would go to centers and the other groups would be involved in small-group instruction. The center activities in all four third-grade classrooms included but were not limited to a listening center, spelling activity, writing, independent reading, phonics activity, math, science, and handwriting. For the purpose of this study, I manipulated the two, 20-minute sessions of small-group instruction during the Guided Reading block.

The Guided Reading time block was on a six-day cycle with students in four small homogenous reading groups based on reading ability. During this study, all students received either the intervention or the control instruction for 20-minutes either by the classroom teacher or by the teaching assistant. Their instructional reading level was the basis for the instruction and text choice. The following sections provide a brief overview the procedures for the teacher training and designed instruction for the intervention classrooms followed by the procedures for the control classroom. Chapter 4

will present a detailed explanation of the teacher training, intervention instruction, and control instruction.

Intervention Classrooms

Teacher training. In August 2006, I met with the intervention teachers and the teaching assistant in the school's library for four hours to describe the designed expository text intervention. This meeting occurred before the start of the school year because the teachers and assistant requested this training date during my initial contact with each person in July 2006. They preferred to have the training in one day instead of 5 sessions, as described in my original proposal, because of time constraints before each school day with meetings and preparation. I present an overview of the training session below. Chapter 4 describes the intervention training session in detail.

I organized the training session into six phases: an introduction, four instructional phases, and a conclusion. During the introduction, I explained my research questions, discussed the designed instruction by defining and explaining important concepts and terms, and explained each expository text's structure and graphic organizer in their Guided Reading collection. For the instructional phases, I selected four expository texts from this collection to represent each text structure and graphic organizer as previously noted in Table 3. The texts were *Horses of the Sea*, *Lizards and Snakes*, *Jane Goodall: Living with the Chimpanzees*, and *A Trip through the Airport*. My objective was to ensure that the intervention teachers and assistant had exposure to each text structure and corresponding graphic organizer.

During each instructional phase, I explained that each text had a purpose, which was either to inform or to explain. Further, I explained how the structure of the text could

be represented by constructing either a topical net, linear string, or matrix graphic

organizer. Then, I used modeling and thinking aloud to construct one-half of the graphic

organizer. For example, the first instructional phase included instruction for description

text structure and a topical net graphic organizer. I purposely chose *Horses of the Sea* for

this phase because I used this text as the posttest in my pilot study. I first explained that a

topical net graphic organizer begins with the title of the text in a center circle on the page

(poster board). Then, each sub-section (heading) in the text becomes a branch off the

center (See Figure 1).
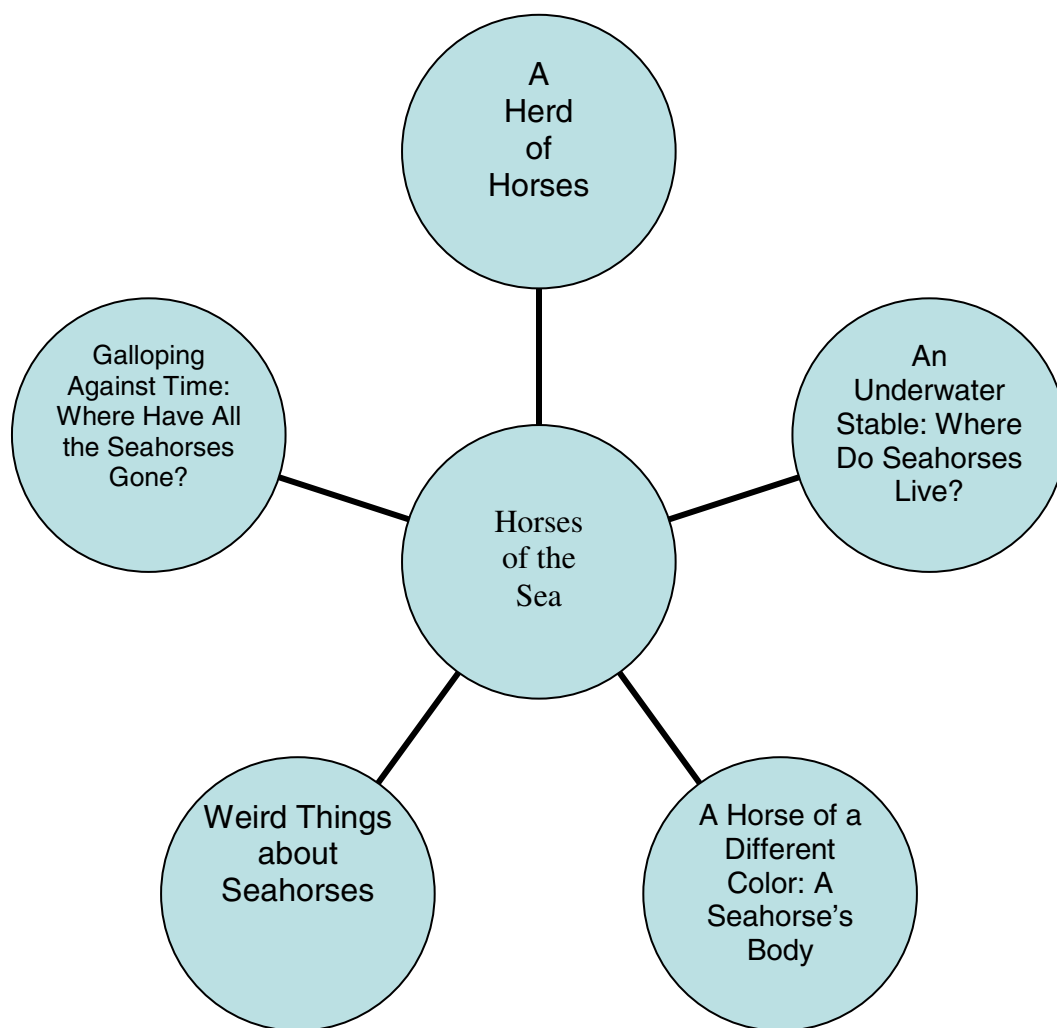
Figure 1. Topical net graphic organizer for *Horses of the Sea*.

I also used modeling and thinking aloud to demonstrate how to complete each sub-section (heading) found in *Horses of the Sea*. Figure 2 illustrates one sub-section by including the heading in the center circle and each detail branching off the heading.

An Underwater Stable: Where Do Seahorses Live?

Seahorses and their relatives live in oceans all around the world, except for the polar areas. They swim in the shallow waters along coastlines, around coral reefs, and among seaweed.
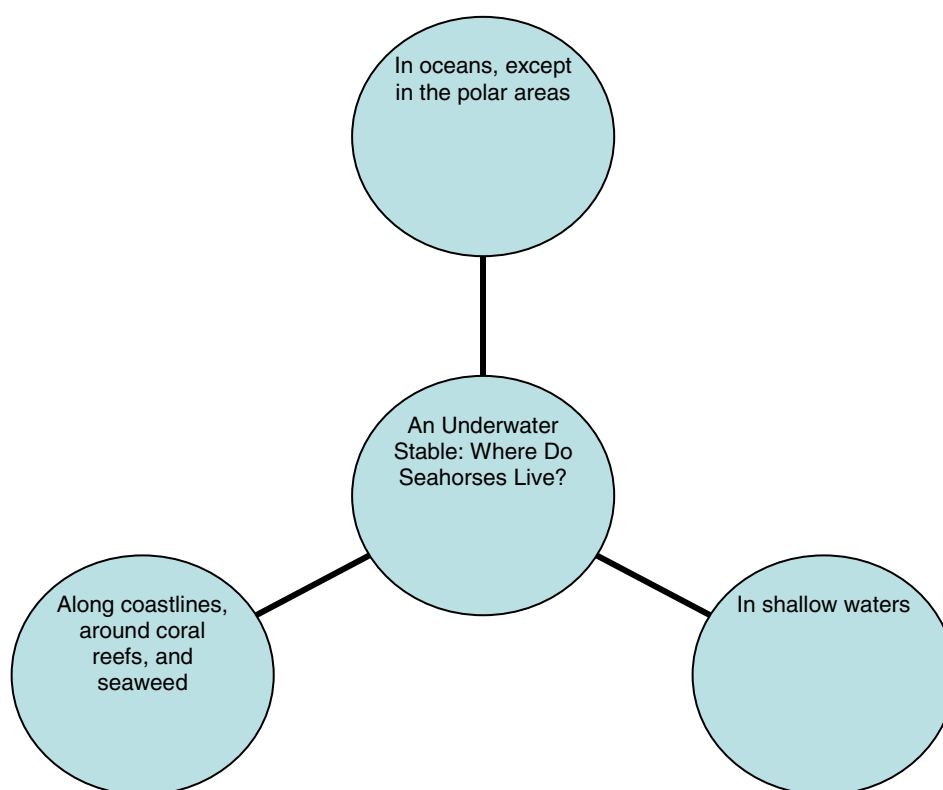
Figure 2. A sub-section from *Horses of the Sea*.

After I completed one-half of the graphic organizer, the teachers and assistant completed the rest of the graphic organizer by determining the main ideas and details from each sub-section. I evaluated the teachers and assistant to assure they understood how to construct the remainder of each graphic organizer. I based my evaluation on the ideas the teachers and assistant placed onto the graphic organizer and the verbal think alouds shared during the training. The teachers and assistant were able to complete each graphic organizer with no discrepancies about main ideas and details. In addition, I explained that an expository text summary begins with a topic sentence and each main idea and detail from the graphic organizer become part of the summary. The teachers and assistant were familiar with writing a summary because the students were introduced to this skill beginning in third-grade. Finally, I carefully reviewed the intervention procedures (See Table 4) and attained to questions and answers from the teachers and assistant.

Intervention Instruction. All intervention students received instruction in descriptive, sequential, and explanatory rhetorical patterns and the topical net, matrix, and linear string graphic organizers using the appropriate text level. Table 4 overviews the type of activities and instruction that occurred on each day of every cycle for the intervention teachers, teaching assistant, and students. Chapter 4 provides further details about each cycle and specific instructions for each lesson.

Table 4

Description of Intervention Classroom Activities and Instruction for Each Guided Reading Cycle

_____

6-Day Cycle	Instruction

_____

6-Day Cycle	Instruction
First Cycle (Pretest)	Days 1 and 2: Teacher/assistant and students read and discussed *Paper Crunch* or *Count on Your Body*
	Day 3: Vocabulary knowledge activity
	Day 4: Phonics activity
	Days 5 and 6: Students created a web and wrote a summary about the text (pretest)
Second Cycle	Days 1 and 2: Teacher/assistant and students read and discussed a different expository text
	Day 3: Teacher/assistant described the text structure to the students
	Days 4, 5, and 6: Teacher/assistant modeled how to construct a graphic organizer and write a summary by using a think aloud process

Table 4 (continued)

_____

6-Day Cycle   Instruction

_____

Third Cycle   Days 1 and 2: Teacher/assistant and students read and

                               discussed a different expository text

                               Day 3: Teacher/assistant and students co-authored the

                               construction of the graphic organizer

                               Day 4: Teacher/assistant and students completed graphic

                               organizer

                               Day 5: Teacher/assistant and students co-authored the

                               writing of a summary by using the graphic organizer

                               Day 6: Teacher/assistant and students completed the

                               summary

Fourth Cycle   Days 1 and 2: Teacher/assistant and students read and

                               discussed a different expository text

                               Day 3: Teacher/assistant and students co-authored the

                               construction of the graphic organizer

                               Days 4 and 5: Completed the graphic organizer

                               Day 6: Teacher/assistant and students co-authored the

                               writing of a summary by using the graphic organizer

Table 4 (continued)

_____

6-Day Cycle   Instruction

_____

Fifth Cycle   Days 1 and 2: Teacher/assistant and students read and

                               discussed a different expository text

                               Day 3: Students co-authored with each other (partners) to

                               create a graphic organizer

                               Day 4: Students completed their graphic organizers

                               Day 5: Students co-authored with each other (partners) to

                               write a summary

                               Day 6: Students completed their summaries

Sixth and Seventh Cycles   Days 1 and 2: Teacher and students read

(Post 1 and Post 2)   *Paper Crunch* or *Count on Your Body* (Post 1) or an

                               instructional level text (Post 2)

                               Day 2: Students constructed graphic organizer and wrote a

                               summary about the text with aid from their graphic

                               organizer

_____

During the first cycle (pretest), students read either *Paper Crunch* or *Count on Your Body*. Then, each intervention teacher and assistant involved the students in a vocabulary knowledge activity that focused on key words and a phonics activity that

focused on word patterns. Students created a web organizer and wrote a summary about the text during the last two days of this cycle as described in the Measures section.

After the pretest cycle (Cycle 1), the intervention teachers and assistant began the instructional cycles (Cycles 2, 3, 4, and 5) by delivering explicit instruction incorporating graphic organizers. Days 1 and 2 of each cycle consisted of the intervention teachers/assistant and students reading and discussing a different expository text. Day 1 involved the teachers and assistant activating prior knowledge with a specific question regarding the topic and introducing any challenging vocabulary. Then, the intervention teachers and assistant started to read the text with the students by asking them to read a portion of the text silently, orally, or with a partner. During Day 2, the students completed reading the expository text. While reading the text, the teachers and assistant asked questions and created discussion that focused on the students retaining information presented in the text. These two days were typical guided reading of a text for this particular elementary school. Further, this type of reading and discussing was virtually identical to the control instruction.

The second cycle began the designed intervention. After reading and discussing the text (Days 1 and 2), the third day involved the intervention teachers and assistant describing the rhetorical pattern (Calfee & Chambliss, 1987; Chambliss & Calfee, 1998) or text structure to the students in terms they understood. During the fourth day of Cycle 2, the teachers and assistant explained how to organize the structure of the text into the appropriately matched graphic organizer. The teachers and assistant modeled how to construct a topical net, linear string, or matrix graphic organizer. During the construction of the graphic organizer, the teachers and assistant utilized thinking aloud to determine

the main ideas and important details from the text. The teachers and assistant completed the graphic organizer on Day 5. Day 5 represented the teachers and assistant modeling and thinking aloud how to begin writing an expository text summary. The intervention teachers and assistant described how to arrange the main ideas and important details from the graphic organizer into complete sentences. Day 6 represented the teachers and assistant completing the summary. As part of the teachers' and assistant's modeling, the think aloud process was a vital aspect in allowing students to see how to identify the structure in a text, represent it graphically, and write a summary from the graphic organizer.

During the third and fourth cycles, the intervention teachers and the assistant gradually released control of the instruction by co-authoring the graphic organizer and summary tasks. Co-authoring with the teacher enables students to master these tasks together before they attempt independent creation of a graphic organizer and summary (Forman & Cazden, 2004). This type of instruction was similar to Palincsar and Brown's (1984) reciprocal teaching instruction by including a great deal of teacher and student interaction This interaction allowed the intervention teachers and assistant to model less as the students adopted more expository text comprehension skill. In addition, the teacher and assistant provided guidance and feedback when necessary. Again, the first two days consisted of the teacher and students reading and discussing the expository texts. On the third day, the teacher or assistant and students constructed the graphic organizer and completed those organizers on the following day. Then, the last two days consisted of the teacher or assistant and the students co-authoring the summary for the text. During these

cycles, the teacher or assistant and students created a graphic organizer and wrote a summary on large poster board.

The fifth cycle constituted the last instructional cycle of the study. During this cycle, the intervention teachers and assistant released more responsibility to the students. Students co-authored with each other to construct the graphic organizer and write the summary. Research has shown that student construction of graphic organizers is a powerful tool in teaching text structure, resulting in higher scores on written recalls (Berkowitz, 1986; Griffin & Malone, 1995). In collaboration with a partner, students determined the main ideas and important details to include in the graphic organizer. Then, the partners decided how to use those ideas and details to write a summary of the expository text. The teacher provided assistance and feedback when needed. Pearson and Dole (1987) indicated that feedback is a unique and critical feature of explicit instruction.

In the final two cycles, students took possession of creating their own graphic organizer and writing a summary of the expository text. These cycles consisted of Post 1 and Post 2 as described earlier.

Control Classroom

The control classroom teacher and assistant did not receive specialized instruction. The control teacher and assistant conducted the Guided Reading lessons based on regular third-grade instruction as developed by the elementary school. In the elementary school, Guided Reading instruction consisted of the teacher leading the students through reading and comprehending a text over a 6-day cycle. Table 5 illustrates the type of activities and instruction that occurred on each day of every cycle for the

control classroom teacher, assistant, and students. Chapter 4 provides a detailed

description of the control instruction.

Table 5

Description of Control Classroom Activities and Instruction for Each Guided Reading

Cycle

_____

6-Day Cycle	Instruction

_____

6-Day Cycle	Instruction
First Cycle (Pretest)	Days 1 and 2: Teacher or assistant and students read and discussed *Paper Crunch* or *Count on Your Body*
	Day 3: Vocabulary knowledge activity
	Day 4: Phonics activity
	Days 5 and 6: Students created a web and wrote a summary about the text (pretest)
Second and Third Cycles	Days 1 and 2: Teacher or assistant and students read and discussed a different expository text for each cycle
	Day 3: Teacher choice activity
	Day 4: Students completed teacher choice activity
	Days 5 and 6: Students completed a writing connection

Table 5

_____

6-Day Cycle   Instruction

_____

Fourth and Fifth Cycles   Days 1 and 2: Teacher and students read and discussed a

                            different expository text for each cycle

                            Day 3: Teacher choice activity

                            Day 4: Students completed teacher choice activity

                            Days 5 and 6: Students completed a writing connection

Sixth and Seventh Cycles   Days 1 and 2: Teacher and students read

(Post 1 and Post 2)   *Paper Crunch* or *Horses of the Sea* (Post 1) or an

                            instructional level text (Post 2)

                            Day 3: Students created a web organizer

                            Days 4 and 5: Students finished web organizer

                            Day 6: Students wrote a summary about the text with aid

                            from their organizer

_____

During the first cycle (pretest), the control classroom resembled the intervention classrooms with students reading either *Paper Crunch* or *Count on Your Body*. The control teacher and assistant involved the students in completing a vocabulary knowledge activity and a phonics activity. Then, students created a web organizer and wrote a summary about the text.

During each instructional cycle of the study (Cycles 2, 3, 4, and 5), the control students read four expository texts overall. The individual lessons during each cycle remained the same throughout the study. During the first two days of each cycle, the control teacher and assistant activated prior knowledge, introduced vocabulary, assisted students in reading the text, and asked questions and created discussion that focused on the information presented in the text. These days were virtually the same as the intervention instruction. On the third day, the teacher chose a reading activity for the group, which included vocabulary knowledge, phonics, or an English skill. The fourth, fifth, and sixth days consisted of a writing connection to the text. This instruction occurred during the same four, six-day cycles as compared to the intervention classrooms. The last two cycles were the posttests. These cycles were identical to the intervention classrooms.

Data Analysis

The following sections describe the summary and graphic organizer analysis, interrater reliability, instructional fidelity, and the use of audiotaped instructional lessons. Table 6 is an overview of my research questions in relation to measures and data analysis.

Table 6

Overview of Research Questions, Measures, and Data Analysis

_____

Measure	Data Analysis

_____

1. How do the teacher-student interactions differ between the intervention classrooms and the traditional Guided Reading classroom?

Audiotapes	Coded/ Analyzed data

a. What is the ratio between teacher/student responsibility over time for the two types instruction, explicit incorporating graphic organizers and Guided Reading?

Audiotapes	Transcribed tapes
(4 lessons per teacher)	Compared % of
	teacher/student
	responsibility
	Compared the quality of talk

b. How do the intervention teachers scaffold expository text comprehension?

Audiotaped	Coded/Analyzed data
intervention lessons	Identified descriptors

Table 6 (continued)

Measure	Data Analysis

2. How effective is explicit instruction of expository text structure incorporating graphic organizers in comparison to traditional Guided Reading in developing comprehension of expository text as measured by written summaries with third-grade students of various reading levels?

Pretest	Scored summaries and
Post 1	graphic organizers
Post 2	Mixed ANOVA
	Compared intervention and
	the control

a. How does explicit instruction of expository text affect how third-grade students represent text structure graphically?

Pretest	Scored graphic organizers
Post 1	Descriptive statistics
Post 2	(Means/standard deviations)
	Compared intervention and
	the control

Table 6 (continued)

Measure	Data Analysis

b. How does explicit instruction of expository text affect how third-grade students use their graphic organizers to compose a written summary?

Post 1	Scored summaries and
Post 2	graphic organizers
	Bivariate Correlation
	Between summary scores
	and graphic organizer scores
	Compared intervention and
	the control

c. How does explicit instruction of expository text affect how accurately third-grade students summarize expository text?

Pretest	Scored summaries
Post 1	Descriptive statistics
Post 2	(Means/standard deviations)
	Mixed ANOVA
	Compared intervention and
	the control

Scoring summaries. As noted in Tables 4 and 5, all students wrote three summaries, one during the pretest, and one during Post 1 and Post 2. The purpose of collecting the summaries was to monitor the students' comprehension from beginning of the study to the end. Before analyzing all student summaries, I created a template for each expository text read according to the Chambliss and Calfee (1998) model. The templates reflected a topical net, matrix, or linear string graphic organizer created to match that particular text. Then, I converted each student's summary into a visual representation to determine if the student utilized some form of organization in the writing (Chambliss & Murphy, 2002). Finally, I scored each visual representation based on the rubric system as described in Table 7.

Table 7

Summary and Graphic Organizer Rubric

_____

Score	Explanation of Score
5	Topic plus all of the text's subtopics with related details
4	Topic plus most of the subtopics with related details
3	No mention of overall topic, one subtopic with related details
2	List of details
1	Incorrect content and/or nothing related to text

_____

Research documents the use of a rubric system for scoring a text's structure. Chambliss and Murphy (2002) used a rubric system to score students' argument

structures. Brown, Day, and Jones (1983) utilized two rubrics to score the importance of idea units and to analyze paraphrasing skills versus verbatim recall. For this study, I devised one rubric system. This rubric was applicable to the three rhetorical patterns, description, sequence, and explanation, in the Chambliss and Calfee (1998) model. In addition, the rubric was sensitive enough to determine third-grade students' varying levels of expository text comprehension (Brown et al., 1983).

Finally, I conducted a mixed ANOVA using the summary scores, which evaluated the statistical significance of the within-subject instruction factor (time) and the impact that this intervention had on the two between subjects factors (gender and instructional group). Instructional group had two levels (Explicit Instruction and Guided Reading). Time had three levels (Pretest, Post test one, and Post test two). Gender was included as a between subjects factor to rule out the possibility that differences in performance between girls and boys had an effect. In addition, I analyzed the summary scores based on descriptive statistics (means and standard deviations) in order to determine how accurately third-grade students summarized expository text.

Scoring graphic organizers. I analyzed the graphic organizers collected from the pretest and posttests. I scored each graphic organizer to determine if the student utilized some form of organization in his or her visual representation (Chambliss & Murphy, 2002). I scored each visual representation based on the scoring rubric used for the summaries (See Table 7 in the previous section).

Then, I analyzed descriptive statistics (means and standard deviations) for the graphic organizer scores in order to determine how third-grade students represented text structure. I conducted a mixed ANOVA on the graphic organizer scores with the same

two between subjects factors (gender and instructional group) and within subject factor (Pretest, Post test one, and Post test two). Gender was included as a between subjects factor to rule out the possibility that differences in performance between girls and boys had an effect. This analysis determined whether there were differences over time and between the two types of reading groups for how students represented an expository text graphically. Finally, I correlated the summary score and the graphic organizer score for the two types of classes (Explicit Instruction and Guided Reading). This analysis determined whether third-grade students appeared to use their graphic organizers to compose written summaries**.**

Using the summary and graphic organizer rubric to assign scores. For the pretest and posttest group design, student summaries and graphic organizers were used to determine the effect of explicit instruction incorporating graphic organizers on how students represented text structure graphically, used their graphic organizers to assist writing an expository text summary, and the accuracy of the summaries. Summaries and graphic organizers were scored for both the intervention and the control classrooms to determine if differences existed. In the following examples, I present students' summaries with a constructed visual representation and students' graphic organizers for each rubric score (See Table 7 above). The first five examples (figures 3-7) represent examples of students' summaries. The first section of each figure represents the student's summary. The second section represents my visual representation of the summary. This representation assisted the expert rater and me to determine if the student utilized some form of organization in the summary (Chambliss & Murphy, 2002). The first example (Figure 3) was from Lisa's control classroom during Post 1 where the student read the

text, *Count on Your Body*. This student included incorrect content. Thus, this summary

received a score of one. Because of the incorrect content, I did not create a visual

---

It is fun to count on your body. Did you know you use **200 muscles** to

take a step. Did you know you have **2,100.000 sweat glands**. Did you know

you have 606 muscles in your body. How many hairs do you think you have?

You have about 100,000 hairs. Your brain has **1,000,000,000 nerve cells**.

Your heart beats 2,500,000,000 times a **day**. You have 300,000,000 air sacs.

Your eyes blink 15,000 times a day.

<u>Visual representation</u>

No representation

Figure 3. Student summary score of 1 from *Count on Your Body* during Post 1. Items in

boldface indicate the incorrect information.

The second example (Figure 4) was also from Lisa's control classroom. This student read *Count on your Body* for Post 1. This student included a list of details. Thus, this summary received a score of two.

> There are many things to count on your body. Did you know that there are 206 bones in your body. You probably have more than 100,000 hairs on your head. Each sweat gland would be 48 inches tall. The brain weighs 3 pounds. There are 2 quarts of blood. Your eyes blink 15,000 times each day.

<u>Visual Representation</u>
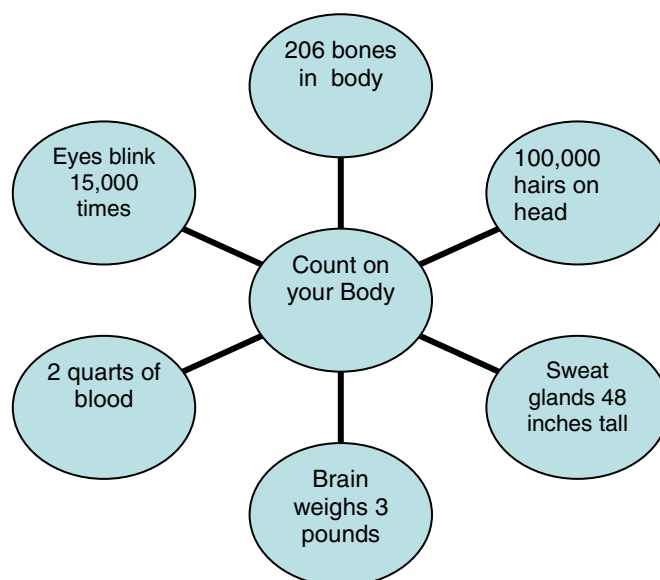
Figure 4. Student summary score of 2 from *Count on Your Body* during Post 1.

Figure 5 represents one sub-topic with related details. This summary was from a student in Sue's intervention classroom who read *Moon Journal* for Post 2. The student included one sub-topic about space missions and the important details about those missions. Thus, this summary received a score of three.

Mrs. Worth told her class to watch the moon at the same time each day for a month. One night the moon was even wider than it was the last time. The students learned about Apollo. The first ten studied how to get a man on the moon. Neil Armstrong and Buzz Aldrin were the first men to walk on the moon. In five more missions, they took a car to the moon that carried equipment. It was called a moon buggy and it was waiting from someone to come back.

Visual representation

Watch the moon for a month	Wider than last time	Apollo

Studied how to get to the moon	First men to walk on the moon, Armstrong and Aldrin	Five more missions, took a car called the moon buggy
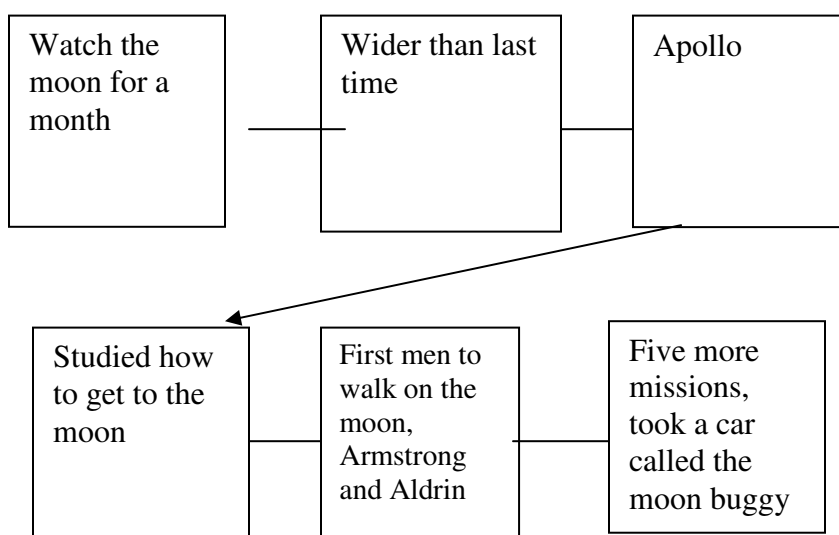
Figure 5. Student summary score of 3 from *Moon Journal* during Post 2.

The fourth example (Figure 6) was from Danielle's intervention classroom during Post 1 where the student read the text, *Paper Crunch*. This summary represented the student writing about the topic, paper, plus three out of the four sub-topics with related details. Thus, this summary received a score of four.

> Wait! Don't throw paper away! Do you know where paper comes from? Do you know it takes time, energy, trees, and resources. Do you know where it goes? It goes to a landfill. There is mostly paper in a landfill. I recycle. Do you know it saves trees. You can also recycle at school. I can recycle everyday and you can too. I love recycling.

Visual representation
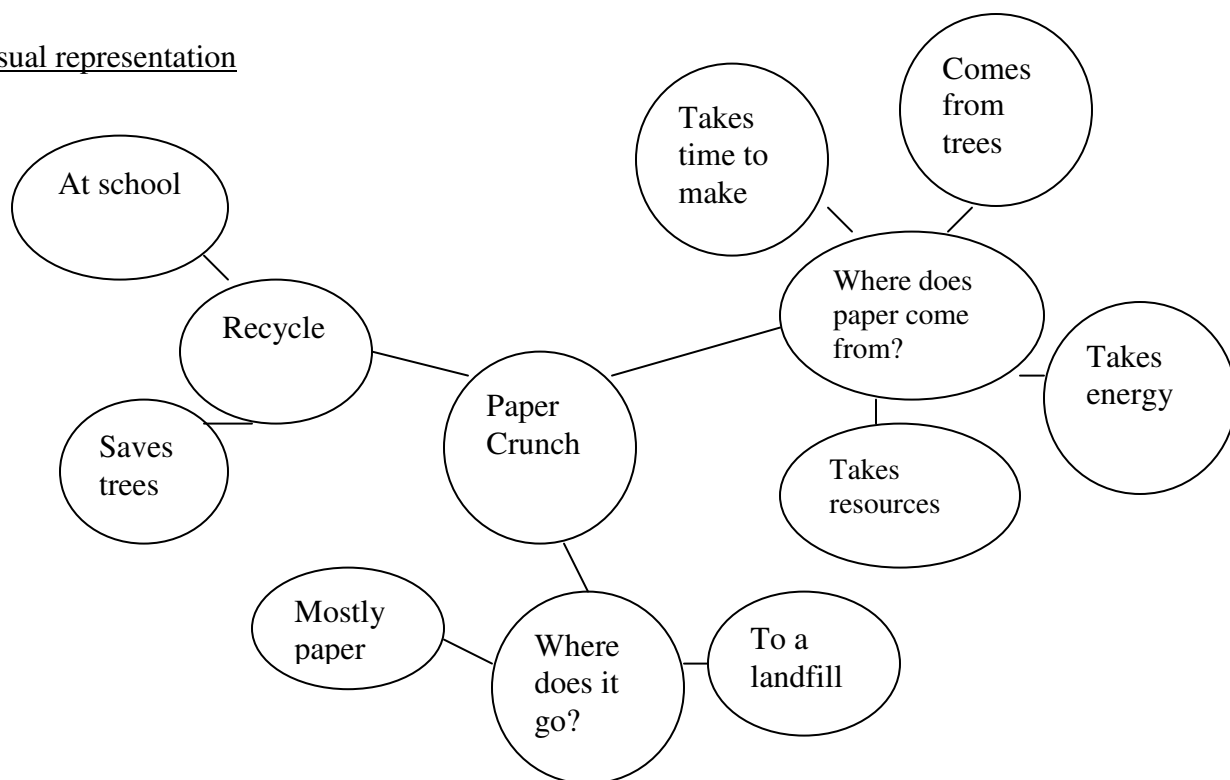
Figure 6. Student summary score of 4 from *Paper Crunch* during Post 1.

The final example (Figure 7) was from Kelly's intervention classroom during Post 1 where the student read the text, *Paper Crunch*. The student included the topic, paper, plus all of the text's subtopics with related details. Thus, this summary received a score of five.

Please read this book because it has a lot of information about paper. Where does paper come from? It comes from every kind of tree. Many mills make trees into paper. Trucks and trains carry the paper to stores and factories. Where does paper end up? Paper that is thrown away comes to a landfill. 50% paper is thrown away. How do you reuse paper? How about you make arts and crafts or use funny paper to wrap gifts. You can reuse paper by helping your pets. Where can you recycle paper? Set up a place to recycle at home. Also, you can get everyone involved. Did you know that recycling save trees. Maybe if you cannot reuse the paper you can recycle the paper. I hope if you want to throw that piece of paper away that you will think about it.

Figure 7. Student summary score of 5 from *Paper Crunch* during Post 1

Visual representation

Everyone involved

Recycle Paper

At home

From trees

Mills make trees into paper

Where does paper come from?

Trucks and trains carry

Saves trees

Paper Crunch

Making arts and crafts

Reusing Paper

To a landfill

Helping your pet

Use funny paper to wrap gifts

Where does paper end up?

50% is paper
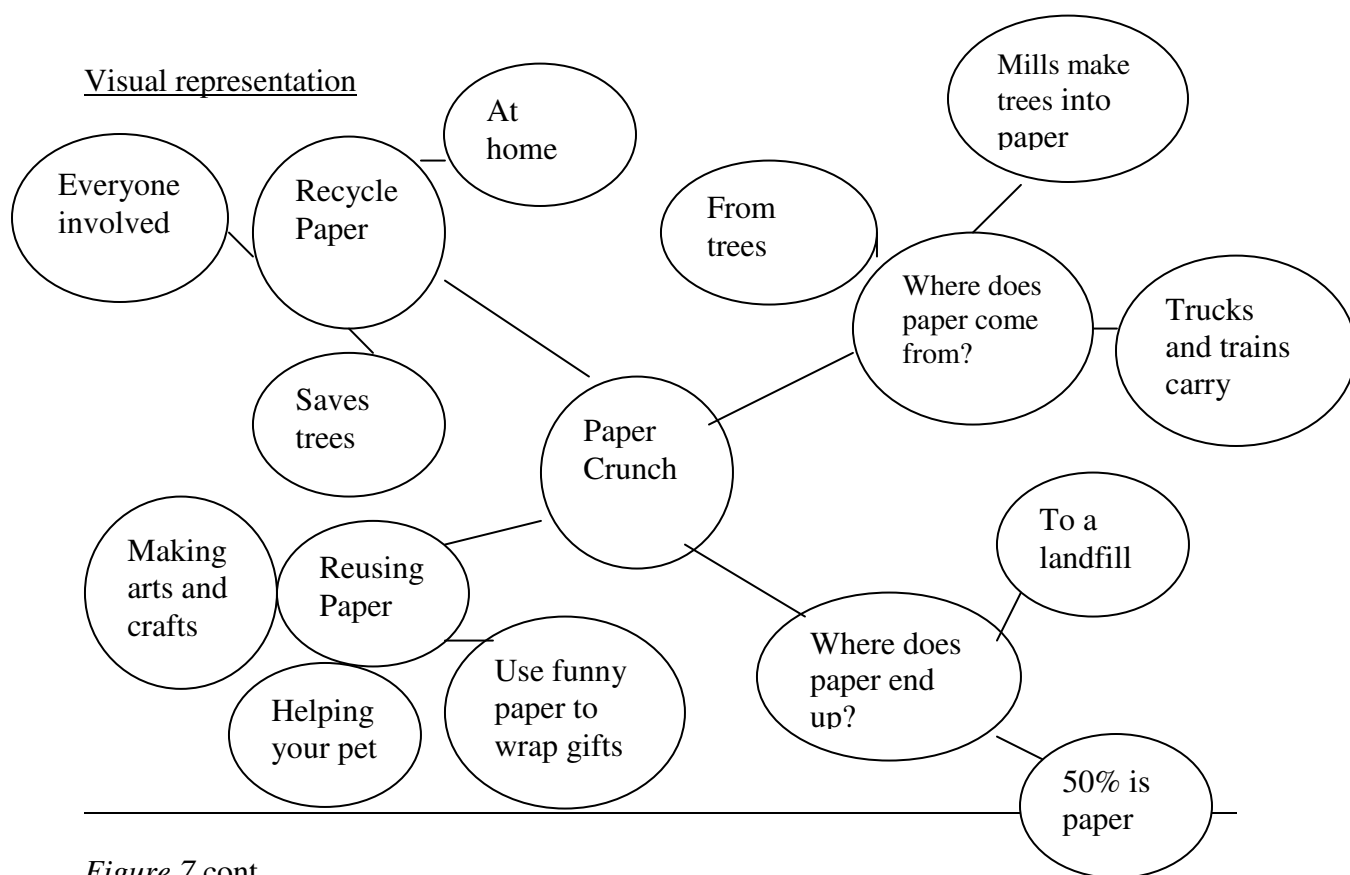
Figure 7 cont.

The next five examples (Figures 8-12) represent students' graphic organizers for each rubric score. The first example (Figure 8) was from Lisa's control classroom during Post 1 where the student read the text, *Count on your Body*. This graphic organizer contained incorrect information about lungs. Thus, this graphic organizer received a score of one.
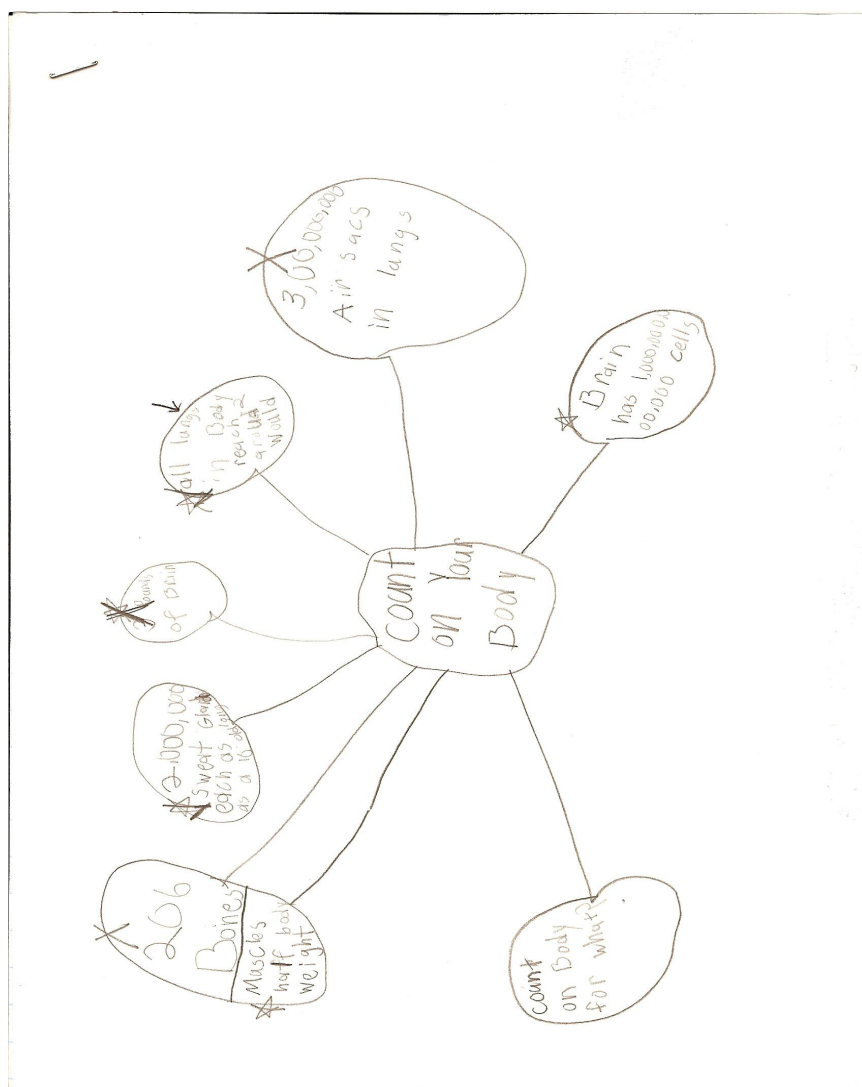
Figure 8. Student graphic organizer score of 1 from *Count on your Body* during Post 1.

The second example (Figure 9) was also from a student in Lisa's control classroom. This student read *Paper Crunch* during Post 1. The student included a list of details on the organizer. Thus, this graphic organizer received a score of two.
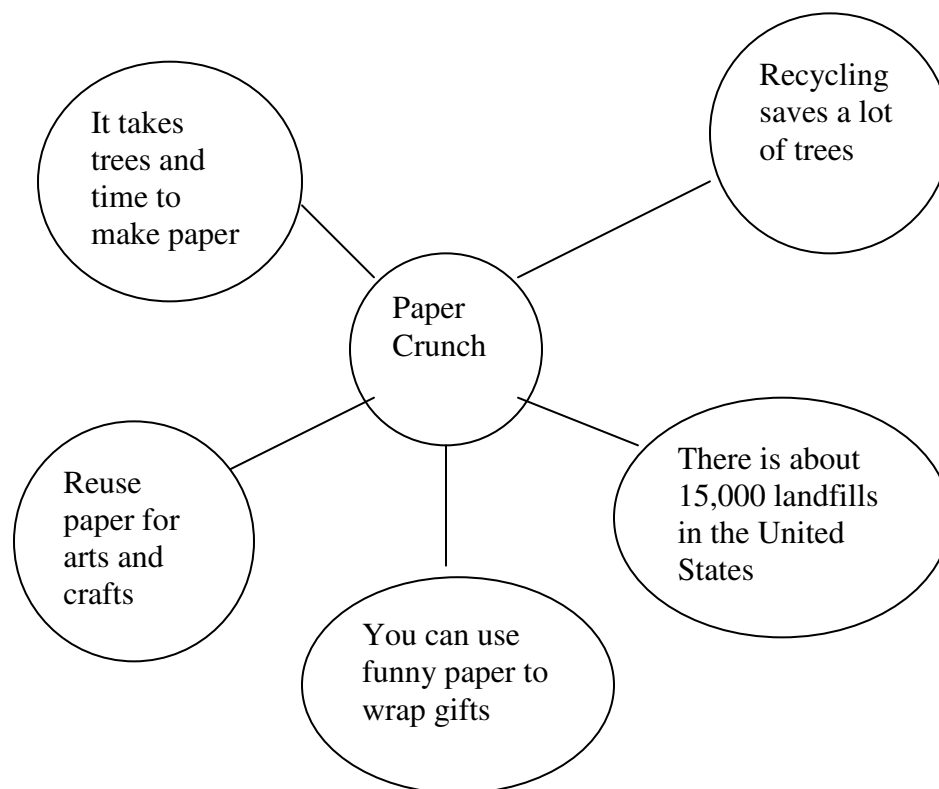
Figure 9. Student graphic organizer score of 2 from *Paper Crunch* during Post 1. This graphic organizer was reconstructed because of very light markings on the original document, which prohibited it to scan properly.

The third example (Figure 10) was from Kelly's intervention classroom during Post 2 where the student read the text, *Artful Artists*. This student constructed the graphic organizer to include one sub-topic, how to make paper, and the important details about that sub-topic. Thus, this graphic organizer received a score of three.
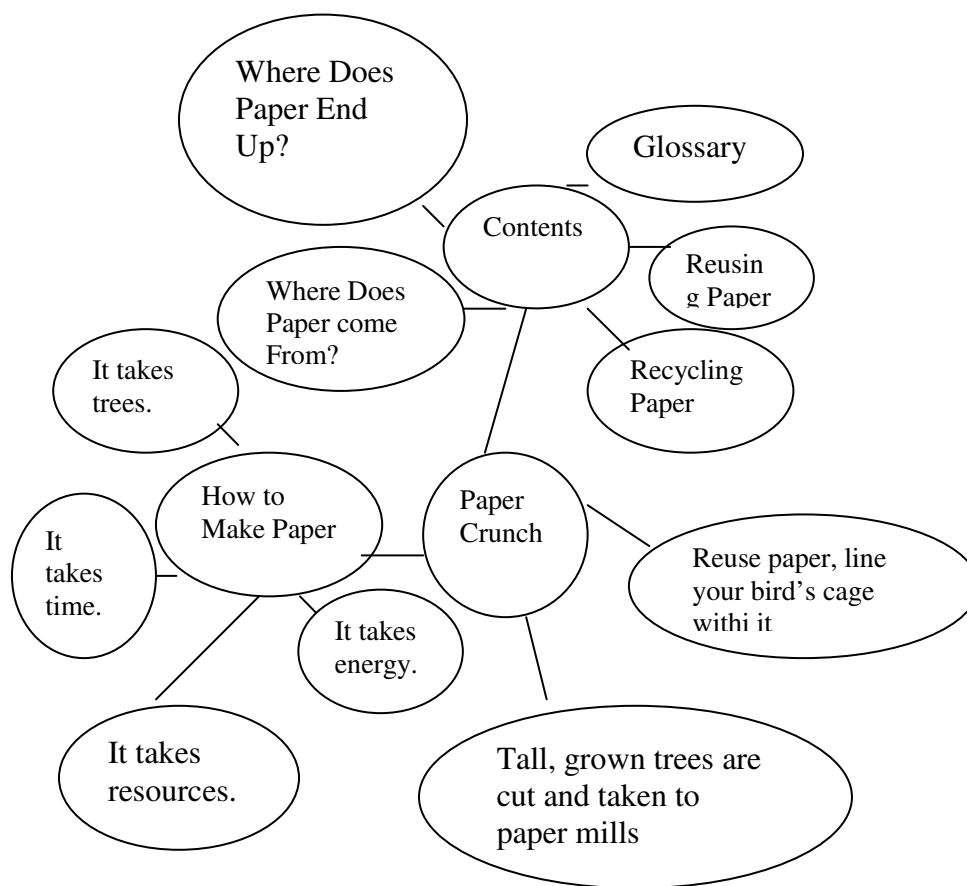
Figure 10. Student graphic organizer score of 3 from *Artful Artists* during Post 2. This graphic organizer was reconstructed because it was originally constructed on large construction that would not scan properly.

The fourth graphic organizer example (Figure 11) was from Kelly's intervention classroom during Post 2 where the student read the text, *Connecting to the Internet*. This student included the topic, internet, and most of the sub-topics with important details. Thus, this graphic organizer received a score of four.
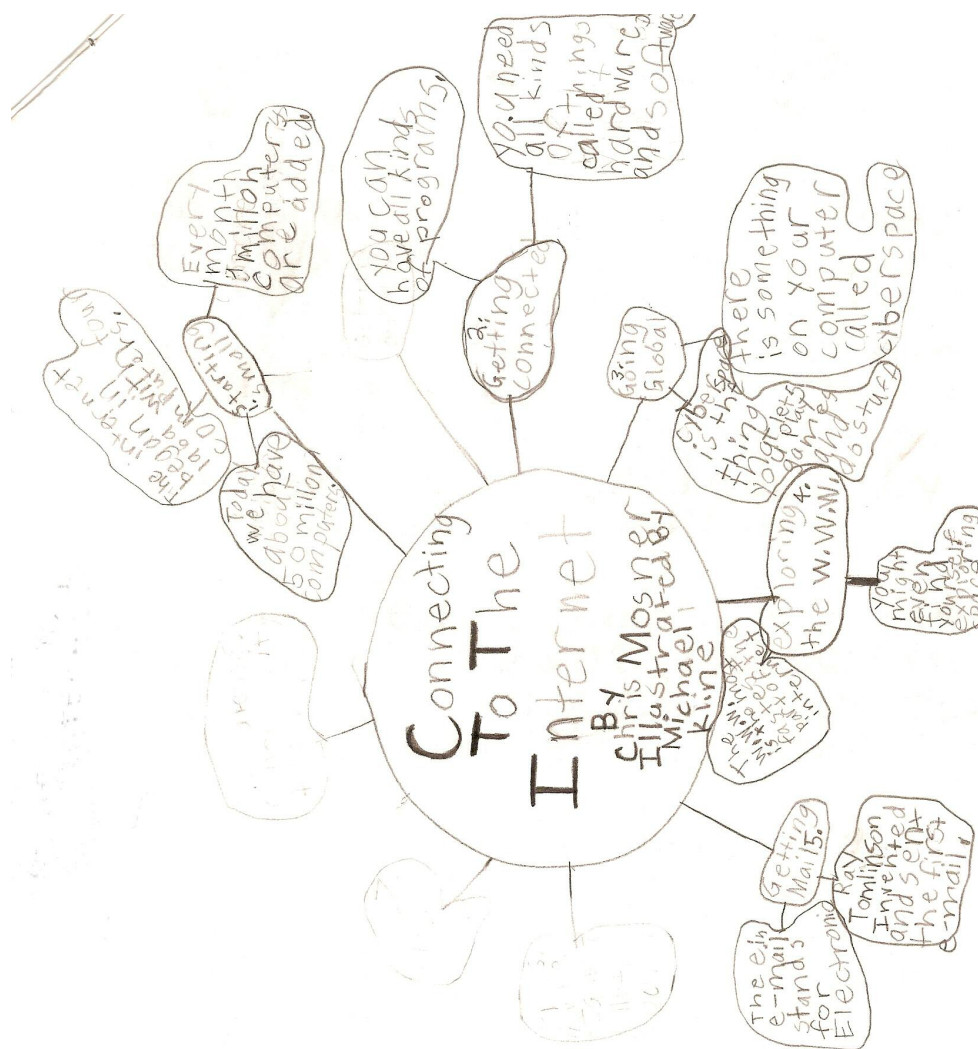
Figure 11. Student graphic organizer score of 4 from *Connecting to the Internet* during Post 2.

The final graphic organizer example (Figure 12) was also from a student in Kelly's intervention classroom who read *Horses of the Sea* for Post 2. This student included the topic plus all sub-topics with important details. Thus, this graphic organizer received a score of five.
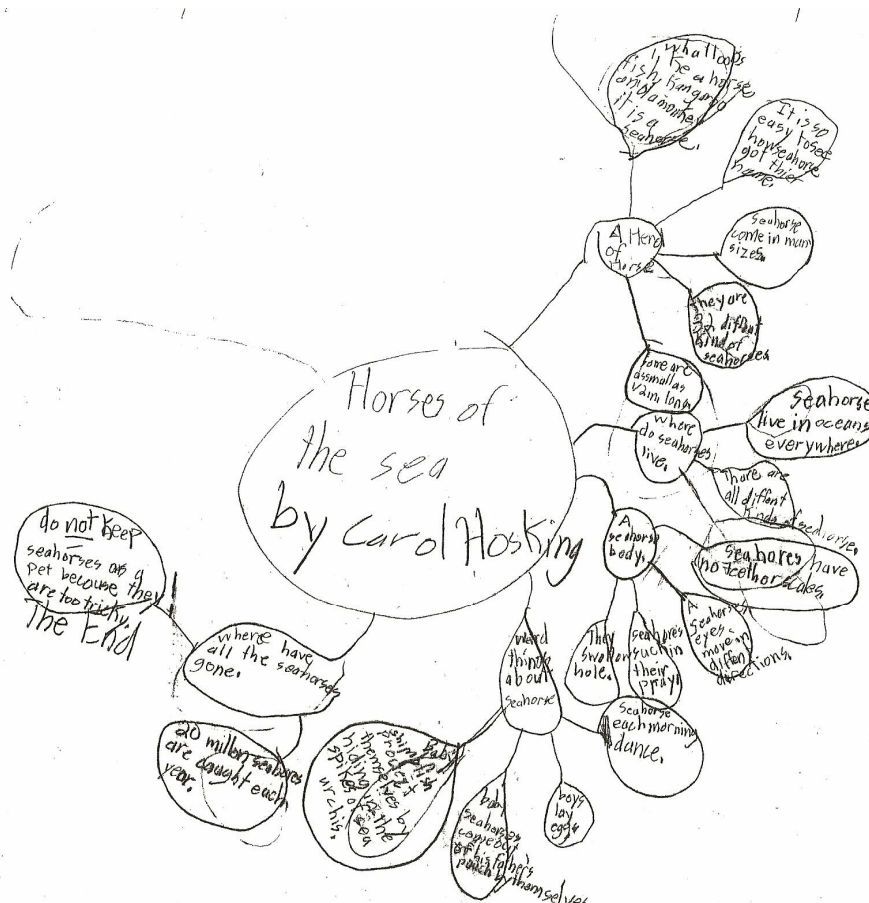
Figure 12. Student graphic organizer score of 5 from *Horses of the Sea* during Post 2.

Interrater reliability. An expert rater with 34 years of elementary education experience also scored the student summaries and graphic organizers. I trained the expert rater using the text, *Horses of the Sea,* which was part of the third-grade Guided Reading series. In addition, this text was part of my pilot study. Therefore, the training utilized previous student summaries and graphic organizers. This training took approximately two 60-minute sessions.

The expert rater independently scored the summaries and graphic organizers across all three tests (Pretest, Post 1, and Post 2). I determined interrater reliability by calculating exact agreement. The discrepancies that became evident involved subtopics and details. The expert rater and I thoroughly discussed these discrepancies and reached an agreement through consensus. Table 8 displays interrater percentages across all measures and tests.

Table 8

Interrater Reliability Percentages for Summary and Graphic Organizer Scores Across All Tests

Source	Pretest		Post 1		Post 2	
	GO	Sum	GO	Sum	GO	Sum
Interrater Reliability	92%	88%	88%	87%	89%	89%

Instructional fidelity. To insure that the intervention teachers and assistant followed the designed intervention and that no similar instruction occurred in the control classroom, I conducted two fidelity checks. I conducted two observations with each teacher and assistant during Cycles 2 and 3. All observations occurred on Day 4 of each cycle.

The same expert rater as described above volunteered to evaluate the observations for fidelity. This rater participated in a 60-minute training session on the instructional cycles of the intervention. I chose to modify the teacher training session to insure that the rater understood the overall designed intervention instruction and the exact procedures

for each instructional cycle. I instructed the rater to evaluate the observations for text

structure knowledge, constructing a graphic organizer, and composing a written

summary.

For this evaluation, I first transcribed each audiotaped observation. Then, the

expert rater and I analyzed the transcribed observations and forms by following the

coding and analysis guidelines as specified by Bogdan and Biklen (1998) and Miles and

Huberman (1994). We familiarized ourselves with the observations by reading and re-

reading the content numerous times to identify the differences in instruction between the

intervention and control classrooms.

Overall, the rater evaluated 12 observations with 100% agreement on all

observations. The rater determined that no similar instructional techniques had occurred

between the intervention classrooms and control classroom. This agreement indicates a

high level of treatment fidelity for my instructional intervention.

In addition, I was able to determine treatment fidelity from informal conversations

with two intervention teachers. The informal conversations allowed me to determine that

the teachers were following the instructional techniques I presented during the

intervention teacher training. In the following two examples, I present conversations that

illustrate the intervention teachers internalizing the designed instruction and presenting it

to the students. The first example (Figure 13) was from a conversation I had with Sue

after conducting her Cycle 2 observation. The second example (Figure 14) was from a

conversation I had with Holly about the process of modeling and the students' behavior.

Sue: During the first two days of this cycle (Cycle 2), I was calling the topical net graphic organizer just a web as I did with the pretest instructions. However, I realized that a topical net organizer is more sophisticated than a web. A web is just a list of ideas while a topical net gives a way to organize the many main ideas and details within each sub-topic. It even helps me to organize all the information in a visual format and not just do the normal discussion of that information.

Researcher: It is very important to use the appropriate graphic organizer language during instruction. Students need to learn that the organizer has a specific purpose. I like how you said it is more sophisticated. Third-grade students always like to feel they are learning things that older students or adults are just learning. Thank you for noticing how important the language is during expository text instruction.

Figure 13. Informal conversation with Sue during Cycle 2 using appropriate terms for graphic organizers.

Holly: The students were very cooperative during Cycle 2 while I was modeling how to construct the organizer and use that organizer to write my summary. At first, I wasn't sure they getting it but as the third cycle ended the students really were able to provide good main ideas and details and began to understand how to place them onto the organizer and even how to write those thoughts into complete sentences for the summary.

Researcher: Did the students appear inattentive during the modeling?

Holly: No, they were very interested in making the organizers and were amazed at how easy it was to write the summary then.

Figure 14. Informal conversation with Holly regarding modeling and student attentiveness.

Audiotapes. I transcribed each audiotaped lesson in order to determine two factors. First, I analyzed the lessons to determine a difference in the teacher/student interactions between the intervention classrooms and the traditional Guided Reading classroom. For this analysis, I calculated teacher and student responsibility percentages using the audiotaped lessons on Day 5 during Cycles 2, 3, 4, and 5. Each teacher and assistant audiotaped four lessons (one lesson per cycle). I timed the amount of teacher and student responsibility or what I considered "talk" by using the tape counter on my transcription machine. I calculated the percentage of teacher and student responsibility for the two types of instruction, intervention and control, and then for individual teachers and assistants. First, I calculated the percentage of total teacher and student responsibility for the intervention classrooms and control classroom for each cycle (2, 3, 4, and 5). I used the total number of counts for the intervention (four lessons per cycle) as the

denominator and the total number of intervention teachers/assistant and then student counts as the numerator. For the control classroom, I used the total number of counts for the control (two lessons per cycle) as the denominator and the total number of control teacher/assistant and then student counts as the numerator. Then, I calculated the percentage of individual teacher/assistant and student responsibility. I used the total number of counts for the individual lessons (one lesson per cycle for each teacher and assistant) as the denominator and the total number of individual teacher/assistant and then student counts as the numerator.

Second, I analyzed the intervention classroom audiotaped lessons to describe how the intervention teachers and assistant scaffolded expository text comprehension. I analyzed the lessons by following the coding and analysis guidelines as specified by Bogdan and Biklen (1998) and Miles and Huberman (1994). I familiarized myself with the lessons by reading and re-reading the content numerous times to identify any patterns among the teachers and assistant. Then, I coded the lessons and looked for common descriptors. I used these descriptors to create a chart that highlighted how the intervention teachers and assistant scaffolded expository text comprehension. I present that chart in Chapter 4.

Conclusion

Chapter 3 described the research methodology used in this study. For quantitative analysis, I used a pretest-posttest control group design that assessed third-grade students' ability to comprehend expository text. For qualitative analysis, I conducted classrooms observations and teachers audiotaped lessons. The qualitative data enabled me to describe the differences in instruction between the intervention and control classrooms. Chapter 4

describes in further detail the intervention teacher training and instruction followed by the

control instruction.

CHAPTER FOUR

Training and Instruction

The outcomes of this study illustrate striking differences between teacher/student interactions and student comprehension in the intervention and control classrooms. These outcomes were dependent on two aspects: the training that the intervention teachers and assistant received prior to the study and how the intervention teachers and assistant implemented that training in comparison to the instruction in the control classroom. Therefore, the purpose of this chapter is multi-faceted. The purpose of this chapter is to describe in detail the teacher training, intervention instruction, and control instruction, which are vital components in understanding the results of this study. By fulfilling this purpose, I will be answering my first overall research question and two subsidiary questions:

How do teacher-student interactions differ between the intervention classrooms and the traditional Guided Reading classroom?

a. How do the intervention teachers scaffold expository text comprehension?

b. What is the ratio between teacher/student responsibility over time for the two types of instruction, explicit incorporating graphic organizers and Guided Reading?

I have labeled the entire section Third-Grade Comprehension of Expository Text.

Third-Grade Comprehension of Expository Text

In the following sections, I provide a description of the teacher training, answer each of the subsidiary questions separately, and then answer my overall research question

in the summary. I first provide a detailed description of the teacher training. Then, I report how the intervention teachers scaffolded expository text. Finally, I report the proportions of teacher and student responsibility.

Intervention Teacher Training

Two vital components of the intervention classrooms and this study were the teacher training and designed intervention instruction. In order to provide a qualitative description of the training, I used two main sources of data: the transcribed observations and audiotaped lessons as previously described in Chapter 3 and the graphic organizer artifacts that I collected from the teacher training. These artifacts were the graphic organizers completed by the intervention teachers and assistant during the training session. In this section, I present a detailed description of the teacher training.

Prior to the start of the study, I met with the intervention teachers and assistant in August 2006 for four hours to explain the designed instruction. The teachers, assistant, and I met in Kelly's classroom. Kelly was in the process of getting her room ready for the start of the year with student desks covered with various items. However, Kelly suggested that I use her Guided Reading table to allow everyone some space to work, and it was close to the easel, which I used to hold the posters for the graphic organizers created during the training. The materials needed for the training were four pieces of poster board, markers, various handouts, a copy of each text used during the training, and snacks for a break. The training session was organized into six phases: an introduction, four instructional phases, and a conclusion.

The introduction provided the teachers and assistant with background knowledge and specific information about my study. I first explained my research questions and

briefly described the analysis process. I explained to the teachers and assistant that I

would be transcribing the audiotaped lessons and then analyzing the transcriptions for

teacher/student responsibility and scaffolded instruction. Next, I explained that I would

score each graphic organizer and summary and conduct quantitative analyses in order to

answer the second research question and subsidiary questions. In addition, I defined the

important terms related to my study (See Appendix E). For example, I defined text

structure as referring to "the overall organization of ideas in a text." I also defined the

important concepts such as the zone of proximal development (Vygotsky, 1978),

scaffolded instruction, modeling, and thinking aloud. In order to be sure that the

intervention teachers and assistant developed the same meanings, I prepared and read

notes during this part of the training. Figure 15 presents those notes.

> Within an explicit instruction framework, an important feature of the
> learning and instruction is the creation of the zone of proximal development
> (Vygotsky, 1978). When instruction occurs in the zone, a child is interacting
> with the teacher and/or peers in order to comprehend a text. This type of
> instruction helps students perform a task or skill in a more efficient way than
> compared with no assistance. This assistance allows the child to complete the
> task or skill at an independent level.

Figure 15. Information presented to the teachers and assistant about the zone of proximal

development, scaffolded instruction, modeling, and thinking aloud.

Then, a teacher scaffolds instruction by structuring the task at a high level and constantly adjusts the amount of adult intervention based on a child's needs or abilities. During scaffolded instruction, there is a gradual release of responsibility from the teacher to the student. For example, at the beginning of new learning and instruction, there is a high-level of teacher responsibility. Then, as learning and instruction continue, the teacher responsibility begins to fade and the student responsibility begins to increase. Finally, the students are able to apply their newly learned strategies in comprehending a text.

It is very important to remember that modeling and thinking aloud are vital to my designed instruction. Modeling is what a teacher does to show a novice reader how to negotiate and comprehend a text. A teacher who incorporates modeling into a lesson will demonstrate how to properly utilize a reading strategy or skill. According to Bandura's (1977) social learning theory, children may learn best when they observe modeled behaviors. In addition, thinking aloud allows teachers to verbally model their thought processes so that comprehending a text is not a mystery for students. This strategy enables a novice reader to hear how an expert reader reflects on the thinking that occurs to comprehend text.

Figure 15 cont.

I ended the introduction phase by distributing the handout called, *Text Structure and Graphic Organizer for Each Third-Grade Rigby Expository Text*. This handout was described in Chapter 3 as Table 3 (See Figure 16).

Level 16		
Count on Your Body	Explanation	Topical Net
A View from Above	Explanation	Topical Net
Paper Crunch	Explanation	Topical Net
Level 17		
Bugs on the Menu	Description	Topical Net
Towers	Explanation	Topical Net
Jane Goodall: Living with		
the Chimpanzees	Sequence	Linear String
A Trip Through the Airport	Explanation	Linear String
Lizards and Snakes	Description	Matrix
New Clues about Dinosaurs	Description	Matrix
Ostriches	Description	Topical Net
Using the River	Description	Topical Net

Figure 16. Text structure and graphic organizer for each expository text.

Level 18

Perfect Paper	Description	Topical Net
Horses of the Sea	Description	Topical Net
Moon Journal	Explanation	Linear String
Pathfinder: Mission to Mars	Sequence	Linear String

Level 19

The Arctic Food Web	Description	Matrix
Pueblo Ruins	Description	Topical Net
Artful Stories	Description	Topical Net
Chasing Tornadoes	Sequence	Linear String

Level 20

Antarctica: The Last		
Wilderness	Description	Topical Net
Connecting to the Internet	Explanation	Topical Net

Figure 16 cont.

By using this handout, I provided an explanation about the type of text structure and graphic organizer associated with each *Rigby* Guided Reading expository text. I explained that each text had a purpose to inform or to explain and that the authors have used either a description, sequential, or explanation pattern to fulfill the purpose. These patterns can be represented as a topical net, matrix, or linear string graphic organizer. During this explanation, I referred the teachers and assistant to the handout titled,

Definitions (See Appendix F). I provided the teachers and assistant with an example. I used the text, *Horses of the Sea*. I explained that the purpose of this text was to provide information about seahorses. The information in the text was presented as a description of where seahorses live, what they look like and eat, and weird things they do. Then, I explained that the main ideas and details in this descriptive text could be organized into a topical net, which the teachers, assistant, and I constructed later in the training session.

After the introduction phase, the teachers and assistant participated in four instructional phases based on text structure and graphic organizer. During the first instructional phase, I used the text, *Horses of the Sea*, as a model for a descriptive text structure and a topical net graphic organizer. The intervention teachers and assistant read the text independently. I explained that when reading and trying to comprehend descriptive expository texts, which contain multiple sub-sections, it is very helpful to create a topical net graphic organizer to represent the important ideas within the text.

I completed one-half of the topical net graphic organizer by modeling and thinking aloud how to construct the organizer to display main ideas and details from each sub-section. First, I explained how to construct a topical net by writing the title of the book in the center of the poster board and placing a circle around it. Then, I mentioned that each main idea would become a spoke off the center circle and each detail would branch off those spokes. Second, I mentioned that after reading the text, I realized that the author wrote five sub-sections or chapters about seahorses and each sub-section's title is a main idea. For example, I said, "The first sub-section is called, *A Herd of Horses*, so it is the first main idea I need to place onto the topical net graphic organizer." I drew a line that connected the title to the first main idea. At the end of that line, I placed a circle and

wrote, *A Herd of Horses*. Then, I thought aloud about the important details for this sub-

section. For example, I said, "After reading this section of the book, I believe one

important detail about seahorses is that they have armor-plated bodies because this detail

is listed in bullet format with two other details." I drew a line out from the main idea

circle and wrote, "armor-plated bodies." I continued in this manner until I completed one-

half of the text. Figure 17 represents the topical net graphic organizer for *Horses of the*

Sea that I created for the intervention teachers and assistant. A large poster board

displayed the organizer.
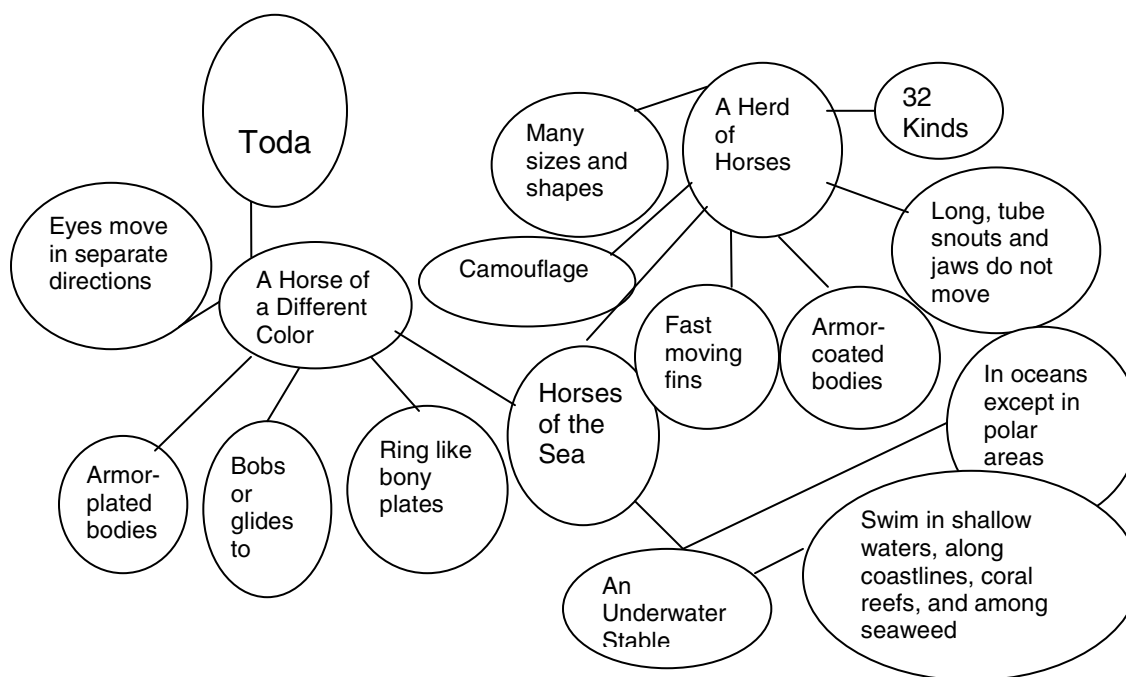
Figure 17. Topical net graphic organizer for *Horses of the Sea* constructed by the

researcher.

After I modeled and thought aloud, the intervention teachers and assistant completed the other half of the organizer with guidance and feedback from me (See Figure 18).

Figure 18. Topical net graphic organizer for *Horses of the Sea* completed by the intervention teachers and assistant.

First, the teachers and assistant silently skimmed the final sub-sections to refresh their memories about those sections. Then, the teachers and assistant discussed the main ideas and details. I reminded them that that the main ideas develop from the title of each sub-heading by referring back to how I created the main idea for each sub-section that I completed. The teachers and assistant agreed that "Weird Things" and "Galloping against Time" were the final two main ideas because those ideas were the last two sub-sections in the text. Next, the teachers and assistant went paragraph by paragraph deciding upon the most important ideas. I guided the teachers to reduce the important details into short phrases. The short phrases would be easier for the students to remember and would allow the students to create their own summary paragraph. The teachers and assistant completed their portion of the organizer with the main ideas and important details.

I determined that the teachers and assistant were able to extract the main ideas and details and place those ideas onto the topical net by checking their organizer with what I had created at home. The two organizers matched. In addition, questions from the teachers and assistant helped me to clarify the completion of the organizer. For example, one teacher asked, "This sub-section is very long. Is there a typical number of main points?" I replied, "No, there are not a typical number of main points. During instruction, it is important to model and think aloud how to determine the main ideas and details by using the title of the sub-section to illustrate the main idea and then use the body of that section to find the important details."

The second instructional phase focused on a descriptive text structure that could be represented as a matrix graphic organizer. I used the text, *Lizards and Snakes*, as a model. Again, the teachers and assistant read the text prior to the instruction. I explained

that this text had the purpose to inform and had a descriptive text structure because it contains three to five sub-sections that compare and contrast attributes about lizards and snakes. For example, the text compares where lizards and snakes live and how they hunt prey." Further, I explained that when students are negotiating a descriptive text that compares objects, it is very helpful to create a matrix graphic organizer in order to represent the important ideas.

Next, I completed one-half of the matrix graphic organizer by again modeling and thinking aloud. First, I explained how to construct a matrix organizer by creating three columns labeled sub-sections, lizards, and snakes. Then, I mentioned that each main idea or sub-section heading would become a row on the matrix and each important detail about that main idea would be placed under lizard or snake. Second, I completed the first sub-section called, "Introduction." For example, I said, "After reading this section of the book, I believe the most important details about lizards and snakes are that they are reptiles, cold-blooded, and have scales." I wrote those details on the matrix. Then, I said, "I believe I should write "long, thin bodies and no legs as two other important details for snakes in this sub-section." I continued in this format until I completed one-half of the text. Figure 19 represents one-half of the matrix graphic organizer that I constructed for *Lizards and Snakes.*

Sub-Sections	Lizards	Snakes
Introduction	• Reptiles • Cold-blooded • Scales	• Reptiles • Cold-blooded • Scales • Long, thin bodies • No legs
Size	• Most are small	• Many sizes
Habitat	• All over the world • Hot places • On the ground and in trees	• In every part of the world • Mostly hot places • On the ground
Senses	• Good eyesight • Taste the air with a flick of their tongue	• No eardrums • No eyelids • Sense vibrations on ground and by flicking tongues
Staying Hidden	• Avoid enemies • Stalk prey • Same color as where they live	• Same color as their surroundings (camouflage)

Figure 19. Matrix organizer for *Lizards and Snakes* constructed by the researcher.

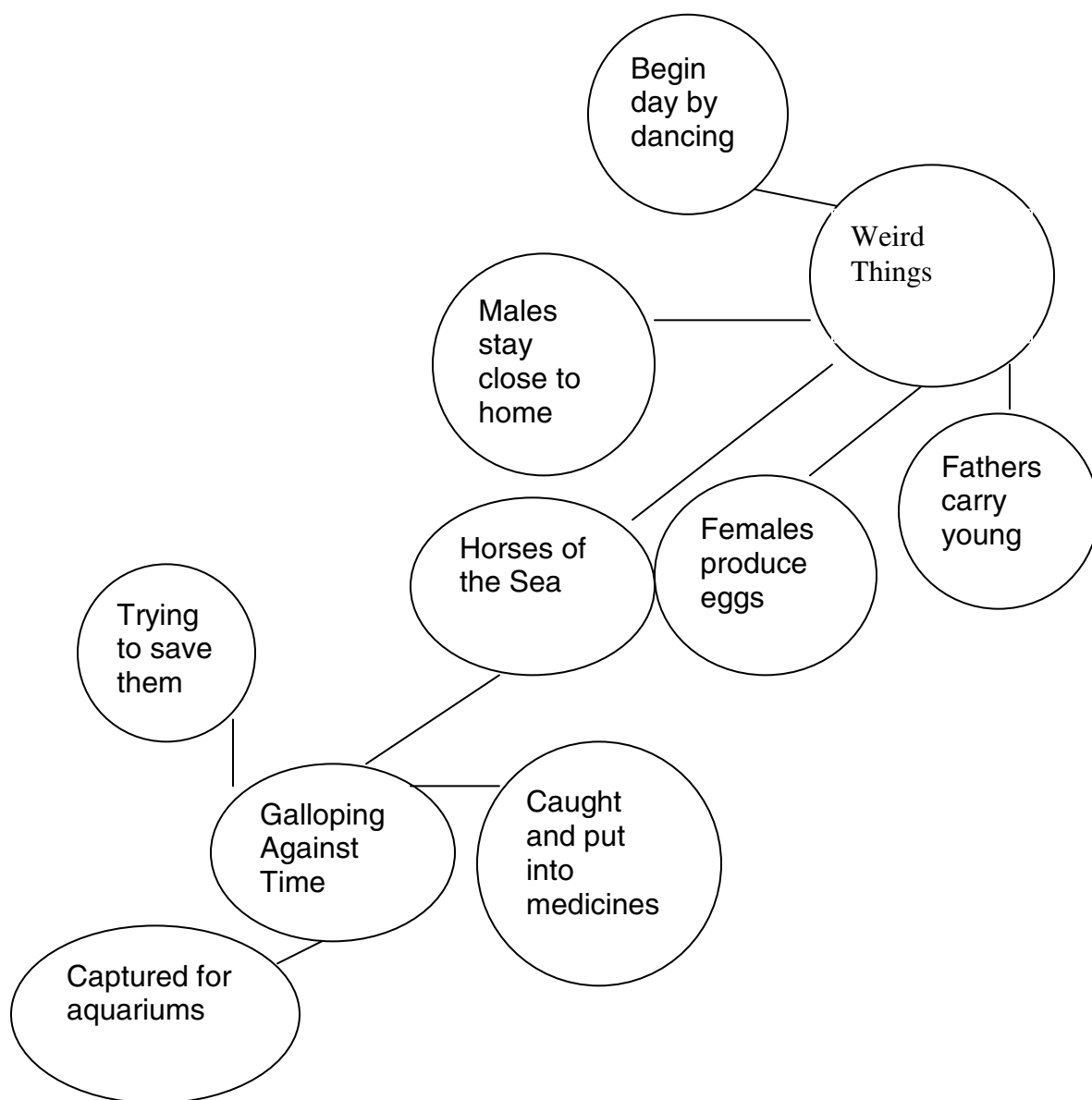From my example, the intervention teachers and assistant completed the other half of the organizer with guidance and feedback from me (See Figure 20). The intervention teachers and assistant collaborated as a group to determine the main ideas and details, which ultimately assisted them in completing the graphic organizer. The teachers and assistant decided that food, hunting, defense, and babies were the final major ideas because those ideas were the titles of the final sub-sections in the text. Within each sub-section, the teachers and assistant discussed the most important details about lizards and snakes. During their discussion, I reminded them only to write a short phrase to represent the detail.

Sub-Sections	Lizards	Snakes
Food	• Eat insects and some plants • Like to eat meat	• Meat eaters • Swallow food whole
Hunting	• Sneak up, pounce, and bite prey • Some are nocturnal (hunt at night)	• Sharp teeth • Some with fangs and venom • Kill by squeezing

Figure 20. Matrix graphic organizer for *Lizards and Snakes* completed by the intervention teachers and assistant.

Defense	• Hide • Running away fast	• Hide and stay very still
Babies	• Lay soft leathery eggs • Warmed by sun • On their own	• Some lay eggs • Some have live young • Mother leaves when born

Figure 20 cont.

I determined the teachers and assistant were able to extract the main ideas and details by placing those ideas onto the organizer and completing it. Their completed organizer matched the organizer that I created at home. In addition, the teachers and assistant verbalized that they felt very comfortable with this type of organizer and did not pose any questions.

During the third instructional phase, I used the text, *Jane Goodall: Living with the Chimpanzees*, as a model for a sequence text structure and a linear string graphic organizer. Prior to this instruction, the teachers and assistant read this text. I explained that the purpose of *Jane Goodall: Living with the Chimpanzees* was to inform readers about Jane's life and was best represented as a linear string graphic organizer. The structure of this text was sequential because it told about Jane's life from childhood through adulthood. Further, I explained that when reading and comprehending sequential expository texts that show progression over time, it is very helpful to create a linear string graphic organizer. From this explanation, I modeled how to construct one-half of the

linear string graphic organizer by using a think aloud process. First, I explained how to construct a linear string by writing the title of the book in a box on the left side of the poster board. Then, I mentioned that each main idea would become a box on the organizer like a flow chart and that each detail would be placed in the appropriate main idea box. Second, I mentioned that after reading the text, I realized that the author wrote five sub-sections or chapters about Jane Goodall and each sub-section's title is a main idea. For example, I said, "The first sub-section is called, *Growing up in England*, so it is the first main idea I need to place onto the linear string graphic organizer." I drew an arrow that connected the title box to the first main idea box. Then, I thought aloud about the important details for this sub-section. For example, I said, "After reading this section of the book, I believe one important detail about Jane is that she was born in London, England." I continued in this format until I completed one-half of the text. Figure 21 represents the linear string graphic organizer that I constructed for this text.
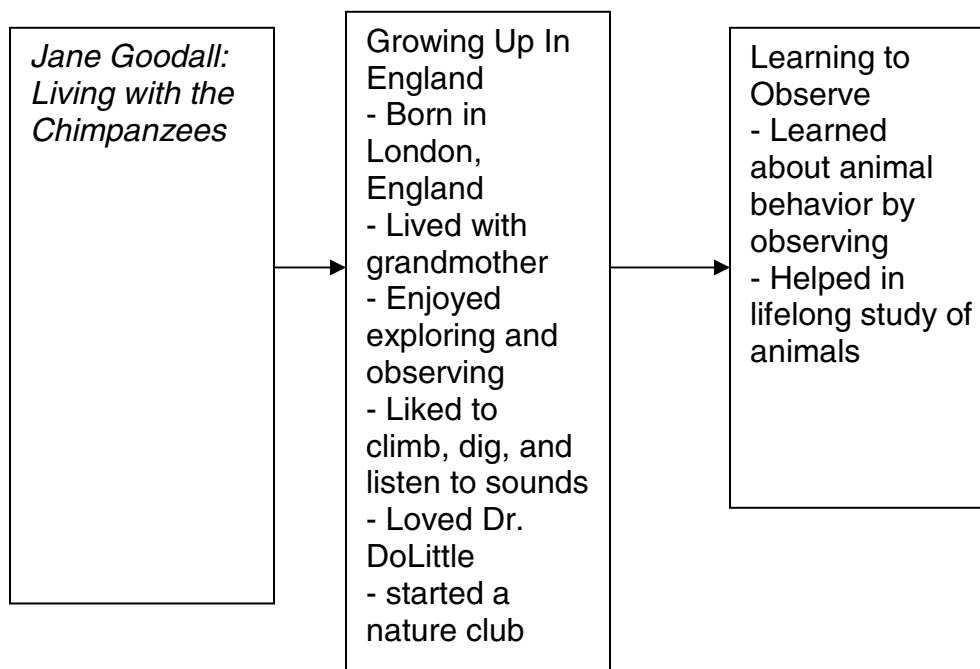
Figure 21. Linear string graphic organizer for *Jane Goodall: Living with the*

Chimpanzees constructed by the researcher.

The teachers and assistant completed the other half of the organizer with guidance

and feedback from me (See Figure 22). Again, the intervention teachers and assistant

collaborated as a group to determine the main ideas and details, which ultimately assisted

them in completing the graphic organizer. They discussed each sub-section by reviewing

each paragraph and determining the important details.

| Going to Africa
- went to Africa
- Met Dr. Leakey
- He offered her a job as his assistant
- Began to observe and write about chimpanzees | → | Living with the Chimpanzees
- Chimps were wild and free
- Observed them
- Discovered chimps could communicate by grunting, panting, and hooting
- Chimps hugged, held hands, and patted | → | Meet the Chimps
- Named each chimp
- Wrote about them in her journal
- Learned chimps lived in groups, gathered and shared food, males are leaders
-Observed for 40 years
-Made several important discoveries |

Figure 22. Linear string graphic organizer for *Jane Goodall: Living with the*

Chimpanzees completed by the intervention teachers and assistant.

Questions from the teachers and assistant helped me to clarify the completion of

the organizer. For example, "How will the students know how many boxes to create on

their organizer?" I replied, "During instruction, it is important to teach the students that

the number of boxes is determined by the number of sub-sections in the text." The

completion of the organizer allowed me to determine that the intervention teachers and

assistant were able to extract the main ideas and details and place those ideas onto the graphic organizer. In addition, their graphic organizer was similar to the graphic organizer that I completed at home. The only difference between the two organizers was that the intervention teachers and assistant included the detail about Jane observing for 40 years. I did not include that detail on my list. The teachers and assistant commented that the students would be amazed at how long Jane observed chimpanzees and thought it was an important detail for the students to remember. I agreed.

The final instructional phase included information about the explanation text structure. I used the text, *A Trip Through the Airport*, as the model. I explained that the purpose of this text was to explain and that an explanation text fills a gap in understanding from a novice to an expert. In addition, I explained that this type of text structure is organized into sub-explanations that follow a logical order. The sub-explanations can resemble various text structures and can be represented by different graphic organizers. For example, *A Trip Through the Airport* has a sequential structure based on the logical order of the sub-explanations. These explanations illustrated a progression over time of what happens when a person arrives at an airport until the take off. Based on the sub-explanations of this text, it would be best to represent the information with a linear string graphic organizer.

I then modeled for the teachers and assistant how to identify the sub-explanations by focusing their attention on the individual headings in the text. First, I reminded the teachers and assistant how to construct a linear string graphic as we did with the text, *Jane Goodall: Living with the Chimpanzees*. Second, I completed the first sub-explanation called, "Moving the People." For example, I said, "After reading this sub-

explanation, the first thing that happens at an airport is that you arrive at the terminal." I

completed one-half of the linear string graphic organizer by using a think aloud process.

Figure 23 represents the organizer that I constructed for the teachers and assistant.

| A Trip Through the Airport | Moving the People
- Arrive at the terminal
- Go to ticket counter to check in suitcases and get a boarding pass
- Find gate
- Use a walkway like a moving sidewalk
-Go thru a metal detector and bags go to an X-ray machine | Loading the Baggage
- Suitcases have special tickets
- 3-letter code on ticket stands for the airport it has to go to
- put on a conveyor belt to sorting area
- Placed into cargo boxes and carried to small trucks
- Into cargo hold on plane |

Figure 23. Linear string graphic organizer for *A Trip Through the Airport* constructed by

the researcher.

The teachers and assistant completed the other half of the organizer with guidance

and feedback from me (See Figure 24). As with the previous phases, the intervention

teachers and assistant collaborated as a group to determine the main ideas and details. I

provided guidance with assisting the teachers and assistant in writing the important

details into short phrases.

| Preparing the Plane
- Fuel
- Food and water
- Turnaround time – in between flights to get ready
- Check to make sure plane is safe for flight | Moving the Airplane
- A tug (small truck) pushes the plane back from the jet way
- Ground control tells pilot which runway to use
- Plane taxis to runway
- Air traffic controllers direct all planes | Take- Off
- You are cleared for take off |
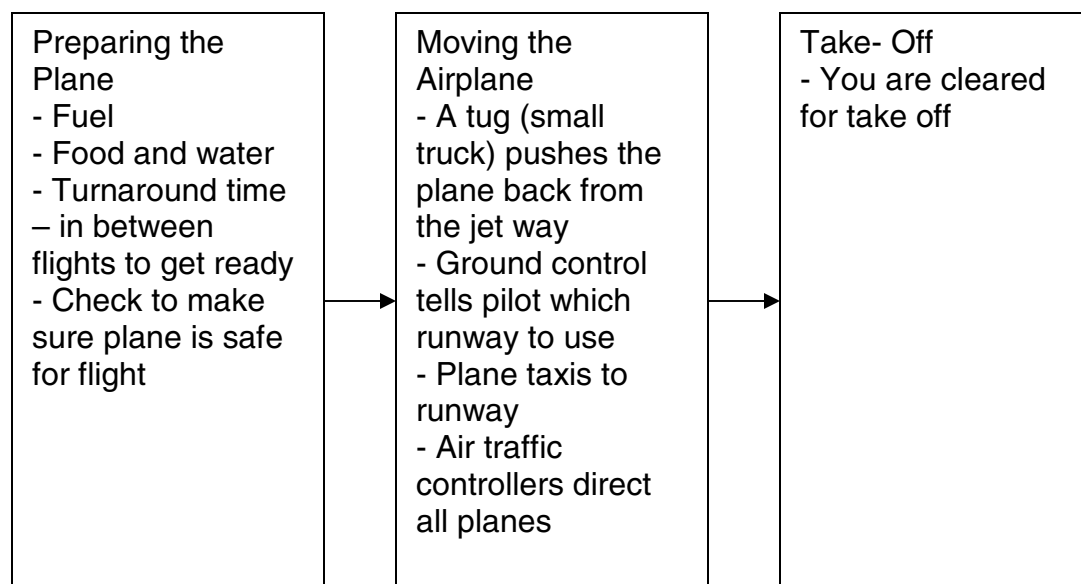
Figure 24. Linear string graphic organizer for *A Trip Through the Airport* constructed by the intervention teachers and assistant.

The teachers and assistant completed the organizer by demonstrating their ability to extract the important ideas and place those ideas onto the graphic organizer. One intervention teacher clarified her understanding about an explanation text structure. She said, "An explanation text structure is one that explains information so that it fills a gap for a novice to become an expert. The sub-explanations provide the underlying structure, which could be descriptive or sequential, and the information could be represented by either a topical net or linear string graphic organizer." I replied, "Yes, an explanation text structure can be difficult for students because the information in a text may be presented as a descriptive or sequential sub-explanation structure." In addition, their graphic organizer included the same main ideas and details as compared to the one I created at home.

The conclusion of the training session included the intervention teachers and assistant receiving the handout, *Description of Intervention Classroom Activities and Instruction for Each Guided Reading Cycle*. This handout was described in Chapter 3 as Table 4 (See Figure 25). This figure explains the procedures for the intervention. I discussed each cycle of the study by highlighting activities and noting the collection of student data.

First Cycle (Pretest)	Days 1 and 2: Teacher/assistant and students read and discuss *Paper Crunch* or *Count on Your Body*
	Day 3: Vocabulary knowledge activity
	Day 4: Phonics activity
	Days 5 and 6: Students will create a web and write a summary about the text (pretest)
Second Cycle	Days 1 and 2: Teacher/assistant and students read and discuss a different expository text
	Day 3: Teacher/assistant describe the text structure to the students
	Days 4, 5, and 6: Teacher/assistant model how to construct a graphic organizer and write a summary by using a think aloud process

Figure 25. Description of intervention classroom activities and instruction for each guided reading cycle.

Third Cycle	Days 1 and 2: Teacher/assistant and students read and discuss a different expository text
	Day 3: Teacher/assistant and students co-author the construction of the graphic organizer
	Day 4: Teacher/assistant and students complete graphic organizer
	Day 5: Teacher/assistant and students co-author the writing of a summary by using the graphic organizer
	Day 6: Teacher/assistant and students complete the summary
Fourth Cycle	Days 1 and 2: Teacher/assistant and students read and discuss a different expository text
	Day 3: Teacher/assistant and students co-author the construction of the graphic organizer
	Days 4 and 5: Complete the graphic organizer
	Day 6: Teacher/assistant and students co-author the writing of a summary by using the graphic organizer

Figure 25 cont.

Fifth Cycle	Days 1 and 2: Teacher/assistant and students read and discuss a different expository text
	Day 3: Students co-author with each other (partners) to create a graphic organizer
	Day 4: Students complete their graphic organizers
	Day 5: Students co-author with each other (partners) to write a summary
	Day 6: Students complete their summaries
Sixth and Seventh Cycles (Post 1 and Post 2)	Days 1 and 2: Teacher and students will read *Paper Crunch* or *Count on Your Body* (Post 1) or an instructional level text (Post 2)
	Day 2: Students construct graphic organizer and write a summary about the text with aid from their graphic

Figure 25 cont.

All teachers and assistant commented that they understood the designed intervention. Approximately one and one-half months passed between the teacher training and beginning the study in the classrooms. I did send an email asking the intervention teachers and assistant if they would like a short refresher training session but they replied that they were comfortable with starting the study without the session.

Scaffolding Expository Text Instruction

My first subsidiary question asked how the intervention teachers and assistant scaffolded expository text instruction. I used one source of data to answer this question. I analyzed the transcriptions from the audiotaped lessons during Cycles 2, 3, 4, and 5. As discussed in Chapter 3, each instructional cycle consisted of six lessons (one lesson per day). Prior to the instructional cycles, I contacted each teacher and assistant in order to remind them to audiotape the first 20-minute lesson on Day 5 during Cycles 2, 3, 4, and 5. Thus, each teacher and assistant audiotaped four lessons (one lesson per cycle). In order to report the results, I coded all transcribed lessons, organized the data by descriptors, and created a table to assist me in answering this question. Table 9 displays the common descriptors from the transcribed lessons. The descriptors are presented according to each cycle.

Table 9

Common Descriptors Related to Scaffolding Expository Text Instruction

Cycle	Intervention
Cycle 2	Teacher modeling
	Teacher thinking aloud
	Accurate rhetorical pattern and graphic organizer vocabulary and explanation by the teacher
	Identification of main ideas and details

Table 9 Cont.

_____

Cycle   Intervention

_____

Cycle 3   Less teacher modeling

                         Some student responsibility

                         Some teacher thinking aloud

                         Teacher prompting and feedback

                         Accurate rhetorical pattern and graphic organizer vocabulary and

                         explanation by the teacher

                         Identification of main ideas and details

Cycle 4   More student responsibility

                         Teacher guidance and feedback

                         Identification of main ideas and details

Cycle 5   Student responsibility

                         Minimal teacher guidance and feedback

_____

I identified the descriptors highlighted in Table 9 for two reasons. The descriptors

matched both the training that I designed and other research and theory about scaffolded

instruction. In this way, I highlight how the scaffolded instruction changed over the

course of the four instructional cycles as students gained expository text competence. In

addition, this section presents a detailed description of the control instruction that

illustrates how the instruction differed from the designed intervention. For each

descriptor indicated in Table 9 and for the control instruction, I provide excerpts of lessons from each cycle where appropriate.

Interrater reliability. The same expert rater who scored the student summaries and graphic organizers, as described in Chapter 3, analyzed the transcribed intervention lessons from Cycles 2, 3, 4, and 5. I provided a modified version of the teacher training I developed for the intervention teachers and assistant. This modified version focused on developing the notion of scaffolded instruction and explaining each instructional cycle. This training took approximately one 60-minute session.

The expert rater independently analyzed the transcriptions from the audiotaped lessons during Cycles 2, 3, 4, and 5. In order to report this analysis, the rater coded all transcribed lessons, organized the data by descriptors, and created a table, which noted common descriptors. I determined interrater reliability by calculating exact agreement. The discrepancies that became evident involved student responsibility and teacher guidance and feedback. The expert rater and I thoroughly discussed these discrepancies and reached an agreement through consensus. Table 10 indicates interrater percentages across all cycles.

Table 10

Interrater Reliability Percentages for Transcribed Intervention Lessons across Cycles 2, 3, 4, and 5

Source	Cycle 2	Cycle 3	Cycle 4	Cycle 5
Interrater Reliability	92%	97%	96%	98%

Intervention instruction. The intervention instruction occurred during the intervention classrooms' Guided Reading block of their Reading and Language Arts time block as described in Chapter 3. This block of time was 40-minutes in length and consisted of two 20-minute small group instructional sessions. The classroom teacher and assistant delivered instruction to the four groups during this time, two groups at a time. Each group consisted of the teacher or assistant and six children.

The intervention teachers conducted and organized their Guided Reading sessions in a similar format. Each intervention teacher conducted her Guided Reading lessons at a table located towards the back of the room. During the lessons, the students sat around the table. The intervention assistant had her own small room located in the third-grade hallway that consisted of a chalkboard, table with seven chairs, and a bookshelf. Holly conducted all her Guided Reading lessons in this room. The students who were not with the classroom teacher or assistant sat at their desks or on the floor to complete center activities. In their groups, all intervention students received instruction in descriptive, sequential, and explanatory rhetorical patterns and the topical net, matrix, and linear string graphic organizers using the appropriate text level.

The following explanation provides a detailed description of the intervention classroom lessons during each 6-day cycle. The first cycle was the pretest. During Days 1 and 2 of this cycle, the intervention teachers and assistant introduced either *Paper Crunch* or *Count on Your Body* by activating prior knowledge with a specific question regarding the topic of the text and introducing any challenging vocabulary. For example, one intervention teacher asked, "What happens to paper when we throw it away?" One student replied, "It goes into a garbage truck." Then, the intervention teachers and

assistant read the text with the students by asking them to read a portion of the text silently, orally, or with a partner. During Day 3, the students completed a vocabulary knowledge activity. For example, one teacher asked students to find two words that were difficult in terms of knowing the definition. This teacher conducted a lesson on context clues to assist in determining the meaning of unknown words. Day 4 of the pretest cycle involved the students completing a phonics activity. For example, the intervention teachers and assistant instructed the students on words with a suffix *ed* or words that had similar spelling patterns.

The final two days of the Pretest cycle consisted of the intervention teachers and assistant instructing students to create a web based on the ideas in the text, and then the students wrote a summary of the text. The students received the following instructions, "Please create a web using the ideas from the book, and then write a summary of the book. You may look back at your web to help write your summary." I collected webs and summaries for quantitative analysis. This analysis included a mixed ANOVA, bivariate correlation, and descriptive statistics (means and standard deviations) as described in Chapter 3.

The instructional cycles of my study included Cycles 2, 3, 4, and 5. During Days 1 and 2 of Cycle 2, the intervention teachers and assistant introduced a different expository text that was chosen by the classroom teacher based on each group's instructional reading level. For example, Sue chose the book, *Pueblo Ruins,* to use with a group of students who were reading on level 19, which corresponds to an end of third-grade reading level. Again, the intervention teacher and assistant activated prior knowledge with a specific question regarding the topic of the text and introduced any

challenging vocabulary. The students read the text silently, orally, or with a partner. During the reading, the intervention teachers and assistant asked the students questions about the information and confirmed their understanding from the students' answers.

The middle of Cycle 2 began the explicit instruction phase of the study. The third day of Cycle 2 included the teachers and assistant explaining the rhetorical pattern (Calfee & Chambliss, 1987; Chambliss & Calfee, 1998) or text structure (description, explanation, or sequence) and describing why that particular text fit that structure. During this lesson, the intervention teachers and assistant used accurate rhetorical pattern and graphic organizer vocabulary and explanation to assist in developing scaffolded instruction and comprehension of expository text. In the first excerpt (Figure 286), Sue began the Cycle 2 lesson by using accurate rhetorical pattern and graphic organizer vocabulary and explanation. The students were learning why the text, *A View from Above*, was an explanation rhetorical pattern. In addition, Sue began to describe the topical net graphic organizer.

A View from Above is the title of our book and we know it is non-fiction. It is written as an explanation. The purpose of the author writing this book was to explain something to you. The author wanted to explain the purpose of creating maps and how they are made. We can use a graphic organizer to pull our ideas out of this book rather than going back to it all the time. We use what is called a topical net.

Figure 26. Sue's Cycle 2 lesson illustrating appropriate vocabulary and explanation of topical net and explanation.

Figure 26 illustrated how the intervention teachers and assistant utilized appropriate vocabulary and explanation to enhance scaffolded expository text instruction. In this excerpt, Sue explained the purpose of an explanation rhetorical pattern in relation to the text. In addition, Sue discussed what a topical net looks like visually and how each section of the net is expanded with main ideas and important details. Research indicates that scaffolded instruction should include an initial high level of teacher explanation in order to develop reading comprehension (Palincsar & Brown, 1984). By using accurate rhetorical pattern and graphic organizer vocabulary and explanation at the beginning, teachers are able to assist students in becoming independent learners and improving expository text comprehension.

The final three days of Cycle 2 involved the teachers and assistant modeling and thinking aloud how to construct a specific graphic organizer and how to use that organizer to assist in writing a summary. Day 4 involved the intervention teachers and assistant constructing the graphic organizer by utilizing modeling and thinking aloud. Thinking aloud provided a way for the third-grade students to hear how to determine the

main ideas and important details from the text. The graphic organizer was constructed on

large poster board. In the following three examples, I present excerpts illustrating how

the intervention teachers and assistant delivered this type of instruction. The first example

(Figure 27) was from the beginning of Holly's Cycle 2 lesson. In this excerpt, the

students listened as Holly reviewed how she started constructing the topical net graphic

organizer for the text, *A View from Above*. As the lesson continued, Holly not only

modeled but used thinking aloud to complete the last section on the organizer. As she

conducted the lesson, Holly had the students participate in the same kind of thinking

aloud. The second example (Figure 28) was from Sue's Day 4 lesson where she was also

beginning to construct a topical net graphic organizer for the text, *A View from Above*.

Yesterday, I completed four sections on our topical net graphic organizer. I started the organizer by putting the title in the center. Then, I have the first section of the book as a line off the title with the important facts off that section. I did the same with the other three sections. When I was completing them, I made sure I was only pulling out the most important information. I am onto my last section called "Satellite Photographs." This is a long section, so I really need to be careful and only pull out the most important facts and only give my reader an overview about what this section is about on my topical net. I am going to skim over my pages, and you do the same to see if I am pulling out the same information as you thought. I want to start with the fact about 1960 and when satellites began (wrote on poster). Next, I think it is important to write about how cartographers took many photographs to piece together and make one map (wrote on poster). I also think that a computer is an important detail because it helps with the process (wrote on poster). I am happy with these facts so far.

Figure 27. Holly's Cycle 2 lesson highlighting teacher modeling and thinking aloud how to construct a topical net graphic organizer.

> I am going to model for you today how make a topical net graphic organizer. Remember that the text structure means the overall purpose of the book. The authors have a purpose in mind and the purpose of our book was to explain to us how to create a map. An organizer that is easy to use for this text structure is called a topical net.
>
> First, I will write the title of our book in a circle in the center of my poster. From that center circle, I will draw a line for each main idea. For example, the first main idea is "Bird's Eye View." I know that is the first main idea because it is the first sub-section or chapter in this book. Then, from that main idea, I will write the most important details. On page 4, I found the first important detail, which is "a bird's eye view is the same as aerial." I will write that detail on my poster.

Figure 28. Sue's Cycle 2 Day 4 lesson illustrating modeling and thinking aloud to construct a topical net graphic organizer.

In these examples, Holly and Sue exhibited teacher modeling and thinking aloud in constructing a topical net graphic organizer. The students listened to the teacher and assistant explain how to create the organizer by using the title of the text, main ideas, and the important details.

The graphic organizer was completed on Day 5. In addition, Day 5 consisted of the intervention teachers and assistant beginning to model and think aloud how to write an expository text summary. They created this summary by using those ideas from the organizer. The ideas were written into complete sentences. The intervention teachers and

assistant did instruct the students to begin the summary with a topic sentence and end with a closing sentence. The summary was completed on Day 6. In the following example, I present an excerpt illustrating teacher modeling and thinking aloud in writing a summary. This example (Figure 29) was from Danielle's lesson where she was modeling and thinking aloud how to use the ideas from the linear string graphic organizer to write a summary for *Jane Goodall: Living with the Chimpanzees*.

Today, we are going to take the ideas and details we put on our linear string organizer and use them to write a summary. Remember, that we used our own words and not necessarily complete sentences to write ideas and details. I think we should start by writing the title and author into our topic sentence. I will write, "*Jane Goodall: living with the Chimpanzees* is a biography written by Annie and Dennis Ferrell." Now, I am going to start with the first main idea box and important details to add to this summary. I think I could write about her birthday and living with her grandmother in one sentence. I will write, "Jane Goodall was born in 1934 in England and she lived with her grandmother." Looking at the other important details from this first main idea, I can write more summary sentences. "Jane loved sitting outside because her grandmother gave her a tree and the tree was her favorite gift. Jane loved being outside so much that she created the nature club and watched animals." I think I should write "observe animals" instead because "observe" is an important word in this book."

Figure 29. Danielle's Cycle 2 Day 5 lesson illustrating teacher modeling and thinking aloud to compose a written summary.

In the above example, Danielle assumed full responsibility in modeling and thinking aloud how to write an expository text summary. Her responsibility included specific information on how to use the graphic organizer to assist in writing the sentences for the summary and how to begin the summary with a simple topic sentence.

The third and fourth cycles represent a gradual release of responsibility from the teacher and assistant to the students. These cycles involved the teacher and assistant co-authoring with the students to construct a graphic organizer and write a summary. Researchers note that co-authoring with a teacher enables students to master the tasks together before they attempt independent use of the skill or strategy (Forman & Cazden, 2004).

The first two days of Cycles 3 and 4 were an exact match to the description provided above for Cycle 2. Then, the intervention teachers and assistant co-authored the construction of the graphic organizer with the students during Days 3 and 4. The intervention teachers and assistant provided guidance and feedback, which was vital in scaffolded instruction because the students could begin to become independent learners of expository text. In the following two examples, I present excerpts illustrating co-authoring and teacher guidance and feedback. Figure 30 was from the beginning of Kelly's Cycle 3 lesson. Kelly and the students co-authored the construction of a linear string graphic organizer by using only the important details for the text, *Pathfinder: Mission to Mars*. The second example (Figure 31) was taken from Sue's cycle 4 lesson. In this excerpt, Sue was in the middle of the lesson where the students and she were constructing a topical net graphic organizer for the text, *Towers*. The students provided the main ideas and details as Sue provided guidance and feedback.

Kelly: Let's get started. Turn to page 2. What is the first that happened in this book?

Student 1: They got ready to launch.

Kelly: What happened before that? NASA announced they had a plan. I am going to write, "NASA wanted to explore Mars." What was the name of this exploration?

Student 2: Pathfinder.

Kelly: I am going to put these details in the first box. Then, an arrow is used to go to the next box. What happens next? They wanted to explore Mars. I am thinking you should say something about page 3. What did they build?

Student 3: Rover.

Kelly: They designed a rover. I will write on the linear string that they designed a lander with a rover. We are on page 4 now. I like this picture because it shows what the rover looked liked. I am thinking the next detail is that they designed a rover to be able to explore Mars by using different things on the rover to keep it moving. I am going to write, "NASA made a rover to explore mars." What is next?

Student 2: They named the rover.

Kelly: NASA named the rover, and they named it Sojourner (wrote on organizer).

Figure 30. Kelly's Cycle 3 lesson illustrating co-authoring with the students to construct a linear string graphic organizer.

Sue: A tower is tall with many stories.

Student 1: You can tell that is very tall because you can see the truck right there. When you see the truck it is very small.

Sue: What can we say the word "stories" means?

Student 2: Not like a story in a book but like a story that goes up and down.

Sue: They are levels. You were very close.

Student 2: A level is where people can live or work.

Sue: Let's go onto Chapter 5. It is found on pages 14-17.

Student 3: Towers do not sink because they have something called a foundation.

Sue: That is right, excellent. Let's use those details and make one short phrase like, "strong foundations are needed." Another fact to write is about what happens when the ground is soft.

Student 3: It sinks.

Sue: So, we should write on the topical net, "Soft ground building will lean." I heard you give me two examples, would you like me to put those on our topical net?

Figure 31. Sue's Cycle 4 lesson highlighting co-authoring and teacher guidance and feedback to construct a topical net graphic organizer.

The final two days of Cycles 3 and 4 consisted of the teachers and assistant co-authoring with the students to compose a written summary. The teachers and assistant helped students to write the main ideas and details from the organizer into complete sentences. The intervention teachers and assistant assisted by redirecting comments or by getting the students started with an idea and then letting them complete the thought. It is important to note that this type of teacher guidance and feedback was vital in providing scaffolded support to augment what the third-grade students with expository text. In following three examples, I present excerpts illustrating how the teachers and assistant helped the students write a summary for an expository text. The first example (Figure 32) was from the beginning of Sue's Cycle 3 Day 5 lesson where she was co-authoring with the students to write a summary for the text, *A View from Above*. The second example (Figure 33) was from the conclusion of Danielle's Cycle 3 lesson. Danielle and the students were in the process of co-authoring the writing a summary for *Pathfinder: Mission to Mars*. Even though the students were assisting, Danielle still provided some teacher modeling and thinking aloud to develop complete sentences from the linear string graphic organizer.

Sue: The first step in writing our summary is to start with a topic sentence.

Student: I have a sentence. A *View from Above* is an explanation of ways you can use a map.

Sue: I am hearing you say you want to start with the book title. That is excellent. I will rewrite it slightly to fit our book, "The book, *A View from Above*, was written to explain how cartographers make maps." Notice that I indented on my paper. Now, we can move onto the first main idea and decide how we want to include those ideas. They do not have to be written as separate sentences. They can be joined together.

Student: Maps show a bird's eye view.

Sue: Let's say, "Maps are drawn from aerial photographs, which are the same as a bird's eye view."

Figure 32. Sue's Cycle 3 Day 5 illustrating co-authoring with the students to write a summary

Danielle: Pathfinder traveled 15,000 miles per hour, which was amazing. It still took seven months to reach Mars. Now, we need to talk about the landing. We said that the Pathfinder had heat shields, parachutes, and airbags to help protect it. I am going to make a sentence for this information, "The heat shields, parachute, retrorockets, and airbags protected the lander and rover during the landing." What is the next fact?

Student 1: On July 4th the pathfinder mission landed.

Danielle: The whole thing landed?

Student 1: The Pathfinder finally landed. Then when they got the signal the whole room filled with joy.

Danielle: I can't imagine how excited they were to hear the signals. Where did the signals go?

Student 2: Earth.

Danielle: Sent signals to Earth. I think the sentence should be, "Pathfinder started sending pictures back to Earth by the end of the work day." Our next fact on the linear string organizer was about July 5th, the remote control, traveled to the rocks, and took pictures for 83 days. Help me out with this fact.

Student 3: In July 5th, a scientist was remote controlling the pathfinder.

Danielle: Good. "On July 5th, the scientists used remote to control the rover."

Figure 33. Danielle's Cycle 3 lesson illustrating co-authoring to compose a summary.

After analyzing individual intervention teacher and assistant transcribed lessons, I found a difference in instruction for Cycle 3. Holly, the intervention teacher assistant, displayed a high level of teacher talk for this cycle compared to the intervention teachers. At the beginning of her lesson, Holly indicated that students in this group had not experienced a topical net graphic organizer. During Cycle 2, these students learned about a linear string graphic organizer, so Holly believed it would be best for the students to see her model and think aloud how to create a topical net. In essence, Holly delivered scaffolded instruction because she created a balance between appraising a student's performance and adapting instructional responses to develop students' autonomy (Beed, Hawkins, & Roller, 1991). Figure 34 represents this balance.

Remember we are just pulling out the most important information for out topical net graphic organizer so we can write a summary later. We are going to complete the section titled, "Weird Things about Seahorses." I need to draw my line out from the center, and I will make a circle for this new heading. The first thing I want to write on the organizer is that seahorses dance for six to ten minutes in the morning. That is weird. Then, I want to talk about the female producing the eggs and finding food while the male stays close to home. This information is all the important details from the first few pages of that section. Just a reminder, I am not writing in complete sentences. I am just writing the important detail because when I write my summary I will make sure all of that information is in complete sentences and makes sense.

Figure 34. Holly's Cycle 3 lesson illustrating teacher responsibility with modeling and thinking aloud.

The fifth cycle was the last instructional cycle of this study. During this cycle, the intervention teachers and assistant released more responsibility to the students. During Days 1 and 2, the teachers and assistant introduced a different expository text in the same format as the previous three cycles. During the third, fourth, fifth, and sixth days of Cycle 5, the students co-authored in partners to create a graphic organizer. In collaboration with a partner, students determined main ideas and important details to include in the graphic organizer. Then, the partners decided how to use those ideas and details to write a summary of the text. Research has shown that student construction of graphic organizers is a powerful tool in teaching text structure, resulting in higher scores on written recalls (Berkowitz, 1986; Griffin & Malone, 1995). The intervention teachers and assistant provided assistance and feedback when needed. The following example illustrates how the students assumed control over constructing a graphic organizer and composing a written summary. Figure 35 was from Kelly's Cycle 5 lesson. In this excerpt, two students were discussing what important details to write on their matrix graphic organizer for *Lizards and Snakes*.

Student 1: We will write that lizards have scales.

Student 2: There are 30,000 different kinds of lizards.

Student 1: I like that we are using the bold words.

Student 2: We should write about lizards being reptiles.

Student 1: And that they are cold-blooded.

Figure 35. Kelly's Cycle 5 lesson illustrating full student responsibility.

The final two cycles (Cycle 6 and Cycle 7) consisted of Post 1 and Post 2. In these final cycles, the students took possession of creating their own graphic organizer and writing a summary of the expository text. Cycles 6 and 7 consisted of three days. During Day 1 of these cycles, the intervention teachers and assistant introduced *Paper Crunch* or *Count on Your Body* (Cycle 6, Post 1) and an instructional level expository text (Cycle 7, Post 2) by activating prior knowledge with a specific question regarding the topic and introducing any challenging vocabulary. Then, the teachers and assistant read the story with the students by asking them to read a portion of the text silently, orally, or with a partner. The final two days of these cycles (Days 2 and 3), the students created a graphic organizer and wrote a summary about the text with aid from their graphic organizer but with no assistance from the teacher or assistant. The students received the following instructions, "Please create a graphic organizer that includes the important ideas and details. Then, write a summary about the book using your graphic organizer." I collected the graphic organizers and summaries for quantitative analysis. This analysis included a mixed ANOVA, bivariate correlation, and descriptive statistics (means and standard deviations) as described in Chapter 3.

The most important thing to notice about the above examples is that as the instructional intervention progressed through the four cycles, students began to assume more control or responsibility for creating the graphic organizer with ideas and details and providing sentences to write the summary. The first instructional cycle did not provide an opportunity for student responsibility because the teacher assumed full responsibility for the comprehension tasks. However, the final three instructional cycles

developed the students' autonomy for constructing a graphic organizer and composing a written summary.

The intervention instruction, as described above, incorporated an explicit instruction framework embedded in an interactive learning environment. The explicit instruction included a high level of teacher modeling and thinking aloud, student responsibility and practice, teacher guidance and feedback, and independent practice. Within this framework, scaffolded instruction was a vital component. Scaffolded instruction allowed the teachers to gradually diminish the responsibility. At the beginning of the instruction, the teachers and assistant were responsible for building comprehension, but, as lessons continued, students became more and more responsible for their own comprehension.

The use of scaffolded instruction provided the needed structure for students to become participants in their expository text comprehension. The type of instruction presented by the intervention teachers and assistant allowed third-grade students to participate in cognitive learning activities that would be difficult or impossible with such support. Thus, the examples over the course of the instructional cycles illustrate a major characteristic of scaffolded instruction as "Where before there was a spectator, let there now be a participant" (Bruner, 1983, p. 60).

Control instruction. In contrast, the control classroom teacher and assistant did not receive specialized instruction. The control teacher and assistant conducted the Guided Reading lessons based on their regular third-grade instruction as developed by the elementary school. The control instruction occurred during the control classroom's Guided Reading block of their Reading and Language Arts time block as described in

Chapter 3. This block of time was 40-minutes in length and consisted of two 20-minute small group instructional sessions. The classroom teacher and assistant delivered instruction to the four groups during this time, two groups at a time. Each group consisted of the teacher or assistant and six children.

The organization of the control classroom for Guided Reading was similar to the intervention classrooms. The classroom teacher conducted her Guided Reading lessons at a table located towards the back of the room. During the lessons, the students sat around the table. The control assistant also conducted her Guided Reading lessons at a table located in the back of the classroom with students sitting around the table. In their groups, all control students read, discussed, and completed activities with an expository text over a 6-day cycle. The students who were not with the classroom teacher or assistant sat at their desks or on the floor to complete center activities. The center activities ranged from free reading, spelling, journal writing, phonics, and art. The following description explains in detail the control instruction.

During the first cycle (Pretest), the control classroom resembled the intervention classrooms with students either reading *Paper Crunch* or *Count on Your Body*. Cycles 2, 3, 4, and 5 represented the instructional phase of this study. During each cycle, the individual lessons for the control instruction remained the same. The first two days of these cycles consisted of the control teacher and assistant introducing an expository text by activating prior knowledge with a specific question regarding the topic and introducing any challenging vocabulary. Then, the control teacher and assistant read the story with the students by asking them to read a portion of the text silently, orally, or with a partner. During the reading, the teacher and assistant asked the students questions about

the information and confirmed understanding through student answers. The following
excerpt (Figure 36) displays Cathy, the assistant, using a question and answer like
instruction. In this example, Cathy reviewed the term, non-fiction.

Cathy: What type of book are we reading, fiction or non-fiction?

Student 1: Non-fiction

Cathy: Right. Non-fiction means?

Student 2: It is true.

Cathy: Right. Non-fiction means it is true. So, our book was true.

Student 3: Yes

Cathy: True, it is a non-fiction book.

Figure 36. Cathy's Cycle 4 lesson illustrating question and answer instruction.

Days 3 and 4 consisted of the control teacher and assistant conducting a text
related activity of their choice. The activities included vocabulary or a phonics skill. For
example, the control teacher conducted a lesson on the *ou* and *oi* diphthongs during Cycle
3. She first provided the definition for the term, "diphthong," and then presented
examples of words having *ou* or *oi* in them. Finally, the students located diphthongs that
could be found in the text and wrote those words onto white boards.

The final two days of each instructional cycle consisted of a writing connection to
the text. For example, Cycle 2 consisted of the control teacher and assistant instructing
the students to write questions about information they learned from reading the particular
expository text. The students were reminded to write a question so another student could

find the answer right from the text. During Cathy's Day 5 lesson, the students read and

discussed the text, *Lizards and Snakes*. Cathy had the students write questions about

lizards and snakes and then share those questions with the group. One student wrote and

asked the question, "How many kinds of snakes and lizards are there on Earth?" Another

student responded with, "5,400." Then, during Cycle 3, Cathy had the students write four

facts they learned from reading the book, *A View from Above*. Each student had to share

their four facts with the group.

The final two cycles (Cycle 6 and Cycle 7) consisted of Post 1 and Post 2 as

described in the intervention instruction. During Day 1 of these cycles, the control

teacher and assistant introduced *Paper Crunch* or *Count on Your Body* (Cycle 6, Post 1)

and an instructional level expository text (Cycle 7, Post 2) by activating prior knowledge

with a specific question regarding the topic and introducing any challenging vocabulary.

Then, the teachers and assistant read the story with the students by asking them to read a

portion of the text silently, orally, or with a partner. The final two days of the posttest

cycles (Days 2 and 3) included the students creating a web and writing a summary about

the text with aid from their web with no assistance from the teacher or assistant. The

students received the following instructions, "Please create a web that includes the

important ideas and details. Then, write a summary about the book using your web." I

chose to keep the instructions for both posttests the same as the pretest in the control

classroom because the control students would not be familiar with the term, graphic

organizers. I did not wish to cause the teacher, assistant, or students any unnecessary

stress by using an unfamiliar term. A new term could have caused the students to ask

many questions about what exactly to do for the task. As stated previously, I collected the

graphic organizers and summaries for quantitative analysis. This analysis included a mixed ANOVA, bivariate correlation, and descriptive statistics (means and standard deviations) as described in Chapter 3.

In conclusion, I did not alter the control instruction. I have provided a description of what normally occurs in the third-grade classrooms in this elementary building. This instruction occurred during the same time as instruction for the intervention classrooms. The pretest and posttests cycles were identical in both types of instruction as well as the initial two days of every cycle.

Teacher and Student Interactions

As described above, the qualitative analysis suggests that the relationships between teacher and student responsibility shifted over time. In this section, the analysis takes a more quantitative look at the same phenomenon to answer the second subsidiary question.

The purpose of this analysis was to determine the percentage of teacher responsibility and student responsibility over time for the two types of instruction, intervention and control. For this analysis, I calculated teacher and student responsibility percentages using data obtained through the audiotaped lessons during cycles 2, 3, 4, and 5. These audiotaped lessons are the same ones I analyzed for themes in scaffolded instruction.

After I transcribed each lesson, I timed the amount of teacher and student responsibility or what I considered "talk" by using the tape counter on my transcription machine. I calculated the percentage of teacher and student responsibility for the two types of instruction, intervention and control, and then for individual teachers and

assistants as described and detailed in Chapter 3. Table 11 illustrates the percentages for the two types of instruction, intervention and control.

Table 11

Percentage of Teacher/Student Responsibility for the Intervention and Control Classrooms during Cycles 2, 3, 4, and 5.

Instruction	Cycle 2		Cycle 3		Cycle 4		Cycle 5	
	T	S	T	S	T	S	T	S
Intervention	95%	5%	72%	28%	50%	50%	16%	84%
Control	51%	46%	54%	46%	58%	42%	56%	44%

Then, I calculated the percentage of individual teacher/assistant and student responsibility. As described in Chapter 3, I used the total number of counts for the individual lessons (one lesson per cycle for each teacher and assistant) as the denominator and the total number of individual teacher/assistant and then student counts as the numerator. Table 12 depicts the individual teacher and assistant percentages for each cycle.

Table 12

Percentage of Individual Teacher/Assistant and Student Responsibility during Cycles 2, 3, 4, and 5.

Teacher	Cycle 2		Cycle 3		Cycle 4		Cycle 5	
	T	S	T	S	T	S	T	S

Intervention								
Danielle	100%	0%	65%	35%	49%	51%	10%	90%
Sue	95%	5%	63%	37%	47%	53%	12%	88%
Kelly	84%	16%	64%	36%	55%	45%	35%	65%
Holly	99%	1%	99%	1%	51%	49%	11%	89%
Control								
Lisa	54%	46%	54%	46 %	52%	48%	71%	29%
Cathy	49%	51%	0%	0%	64%	36%	36%	64%

Based on the analysis for the intervention classrooms, Table 11 illustrates that teacher responsibility decreased as student responsibility increased over the course of the four instructional cycles. This diminishing of responsibility is what Pearson and Gallagher (1983) called a *gradual release of responsibility*.

Specifically, Cycle 2 indicated a high level of teacher responsibility or "talk" for the three intervention teachers and assistant. One intervention teacher, Kelly, displayed a

slight variation in the amount of teacher and student responsibility for Cycle 2. During a discussion I had with Kelly after observing her Cycle 2 lesson, she mentioned that her students needed to be involved in the lessons in order to stay on task. Kelly's instructional awareness coincides with what Berk and Winsler noted that teachers should adjust "the amount of adult intervention to the child's current needs and abilities." (p. 29).

As the instructional cycles continued for the intervention teachers and assistant, a shift in responsibility occurred for Cycle 3. The shift included more student talk. The three intervention teachers were similar in the amount of teacher and student responsibility. However, Holly, the intervention teacher assistant, displayed a high level of teacher talk for this cycle. During Cycle 2, the students in her group learned about a linear string graphic organizer, so Holly believed it would be best for the students to see her model and think aloud how to create a topical net graphic organizer in Cycle 3. Cycle 4 showed another shift in responsibility to include an exact split between teacher and student talk. Finally, Cycle 5 displayed a high level of student responsibility for the intervention classrooms. During this cycle, students were instructed by the teacher or assistant to work with a partner to create a graphic organizer and then use that organizer to assist in writing a summary for the text.

In comparison, the control classroom demonstrated a consistent pattern of teacher and student responsibility except for Cycle 2 (See Table 12). During Cycle 2, I was unable to observe Cathy because she was ill for two days. The students did have a substitute teacher assistant. However, I did not feel it appropriate to observe someone

who was not versed in my study. The control lessons contained instruction that consisted of the teacher or assistant telling or asking and then a response from a student.

Summary

Through each subsidiary question, I was able to determine how the teacher and student interactions differed between the intervention and control classroom. I highlighted how the intervention teachers scaffolded expository text comprehension by presenting a detailed description of the intervention and control instruction and determined the proportion of teacher and student responsibility.

My first subsidiary question confirmed that the intervention teachers and assistant did scaffold instruction as I had designed in my intervention. The beginning of the intervention consisted of a high level of teacher modeling, which included thinking aloud and using the appropriate vocabulary and explanation. Then, Cycles 3 and 4 contained instruction where the teacher and assistant used less teacher modeling and responsibility while including more student responsibility. In addition, the scaffolded instruction included teacher guidance and feedback in order to assist third-grade students in comprehending expository text. The last cycle contained a majority of student responsibility with minimal teacher guidance and feedback.

Second, I discovered that as teacher responsibility decreased, student responsibility increased for the intervention classrooms over the course of the four instructional cycles. In contrast, teacher and student responsibility remained consistent for the control classroom.

Finally, this analysis provided the evidence for me to assert that instruction in the intervention classrooms differed from the control classroom. The intervention instruction

indicated a reciprocal nature in delivering expository text comprehension (Palincsar & Brown, 1984). This instruction contained less teacher responsibility and more student responsibility over time. In addition, the intervention instruction scaffolded the learning and instruction for the students. The intervention teachers and assistant demonstrated competence in assisting third-grade students to become independent learners of expository text. Further, the intervention teachers and assistant displayed a proficient use of scaffolded instruction while working in the students' zone of proximal development (Vygotsky, 1978).

In contrast, the control classroom instruction contained almost equal teacher and student responsibility. The teacher and student responsibility included question and answer sessions similar to the teacher being an interrogator as depicted in Durkin's (1978-1979) comprehension research.

In sum, one major component of this study was the teacher training. The training involved the intervention teachers and assistant not the control teacher and assistant, which is evident in the descriptions and results presented above. It is important to note that Vygotsky believed a knowledgeable other could assist students in developing higher cognitive functions. By having a knowledgeable other assist a child, learning and instruction operate in the zone of proximal development as discussed in Chapter 1. Researchers believe that the knowledgeable other or teacher plays a key role in developing appropriate instruction and creating independent readers (Beed, Hawkins, & Roller, 1991; Pressley et al., 1992).

Conclusion

Chapter 4 described in detail the intervention teacher training, intervention instruction, and control instruction. I explained specific activities and instruction that occurred during the training session and for each day of the pretest cycle, four instructional cycles, and both posttest cycles. Chapter 5 reports the effects of this instruction on children's comprehension.

CHAPTER FIVE

Results

This study examined the effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of three classrooms of third-grade students in comparison to one control classroom. The second overall research question and subsidiary questions guided this analysis:

How effective is explicit instruction of expository text structure incorporating graphic organizers in comparison to traditional Guided Reading in developing comprehension of expository text as measured by written summaries with third-grade students of various reading levels?

a. How does explicit instruction of expository text affect how third-grade students represent text structure graphically?

b. How does explicit instruction of expository text affect how third-grade students use their graphic organizers to compose a written summary?

c. How does explicit instruction of expository text affect how accurately third-grade students summarize expository text?

This chapter reports results of quantitative analyses. This research question with three subsidiary questions explored comprehension specifically with the students creating graphic organizers and writing summaries. To analyze these data, I used means, standard deviations, bivariate correlations, and mixed analysis of variance (ANOVA). I have also labeled this section Third-Grade Comprehension of Expository Text.

Third-Grade Comprehension of Expository Text

This section reports analyses to address how effective the designed intervention was in developing third-grade students' comprehension of expository text. This analysis addressed whether or not the designed intervention could be used to assist third-grade students in comprehending expository text through the creation of graphic organizers and written summaries. The design for this analysis was a pretest-posttest control group design (Campbell & Stanley, 1963), and the primary measures were graphic organizers and summaries as described in Chapter 3.

I report each of the subsidiary questions separately and then answer my overall research question in the summary. I first report on how third-grade students represented text structure graphically. Then, I report how accurately third-grade students summarized expository text. Finally, I report how third-grade students used their graphic organizers to compose a written summary.

Analysis of Graphic Organizers

For this analysis, each graphic organizer received a score ranging from one to five as noted in the rubric described in Chapter 3. A score of one represented "nothing from the text or incorrect information," two represented "a list of details only," three represented "one subtopic with many details," four represented "most of the subtopics and main details," and five represented "all subtopics and main details." After recording a score for each graphic organizer, I calculated the means and standard deviations to determine how third-grade students represented text structure. Then, I conducted a 2 X 2 X 3 mixed ANOVA with two between subjects factors (gender and instructional group) and one within subjects factor (time). The dependent variable was the graphic organizer

score. Table 13 reports means and standard deviations for the intervention and control classrooms for the three testing times. There were virtually no differences between girls ($M = 2.80$, $SD = 1.41$) and boys ($M = 2.83$, $SD = 1.35$). Table 14 is the ANOVA table for this analysis. Observed power is partial eta squared.

Table 13

Means and Standard Deviations on Graphic Organizers for Intervention (N = 56) and Control (N = 21)

Instruction	Pretest	Post 1	Post 2	Total
Intervention	1.95 (.62)	3.71 (1.50)	3.78 (1.27)	3.14 (1.46)
Control	1.95 (.21)	1.86 (.63)	1.90 (.29)	1.91 (.42)
Total	1.95 (.55)	3.21 (1.55)	3.26 (1.38)	

Table 14

ANOVA Table for Graphic Organizers

Source	df	MS	F	p	Observed Power
Between-Subjects					
Instruction	1	72.55	79.74	.00**	.52
Gender	1	.18	.20	.66	.00
Error	73	.91			
Within-Subjects					
Time					
Linear	1	24.43	30.83	.00**	.30
Quadratic	1	6.83	4.40	.04*	.06
Time*Instruction					
Linear	1	27.54	34.74	.00**	.32
Quadratic	1	8.78	5.67	.02*	.07
Time*Gender					
Linear	1	.05	.06	.80	.00
Quadratic	1	.79	.51	.48	.01
Time*Gender*Instruction					
Linear	1	.01	.01	.10	.00
Quadratic	1	.03	.02	.88	.00
Error (Time)	73	.79			

* $p < .05$, ** $p < .01$

Descriptive statistics show higher means for the intervention classes than the control class. See the Total column on Table 13. Student means on the pretest were lower than their means on the post test. See the Total row on Table 13. Student scores differed over time, particularly between the pre-test and Post 1. Finally, students in the intervention classes improved over time, whereas students in the control class did not improve. The cells in Table 13 show that pre testing means for both types of instruction were equal. However, at Post 1, students in the intervention classrooms out-performed the control students. Post 2 intervention means again revealed higher scores for the intervention than the control and from Post 1. These mean scores represent the effect of differences in instruction. The intervention students demonstrated gains in their ability to represent text structure graphically from pre test to both post tests whereas the control classroom showed no gains.

These differences were supported by the statistical tests (See Table 14). Differences between the control and intervention classrooms were statistically significant (F (1, 73) = 79.74, p <.01, η_p^2 =.52). In contrast, gender differences were not statistically significant. The within subjects factor of time indicated a statistically significant linear contrast (F (1, 73) = 30.83, p < .01, η_p^2 =.30). This finding means that student scores increased from Pretest to Post 2 regardless of the type of instruction (see the Total row in Table 13). In addition, Time had a quadratic contrast that reached statistical significance (F (1, 73) = 4.40, p < .05, η_p^2 =.04). The line graph in Figure 37 displays this contrast, which is also reported on the Total row in Table 13. The black line clearly indicates the difference on the total mean scores between Pretest and Post 1. Then, the differences between Post 1 and Post 2 were minimal.

Pretest, Post 1, and Post 2 Total Mean Scores on Graphic Organizers
for All Students
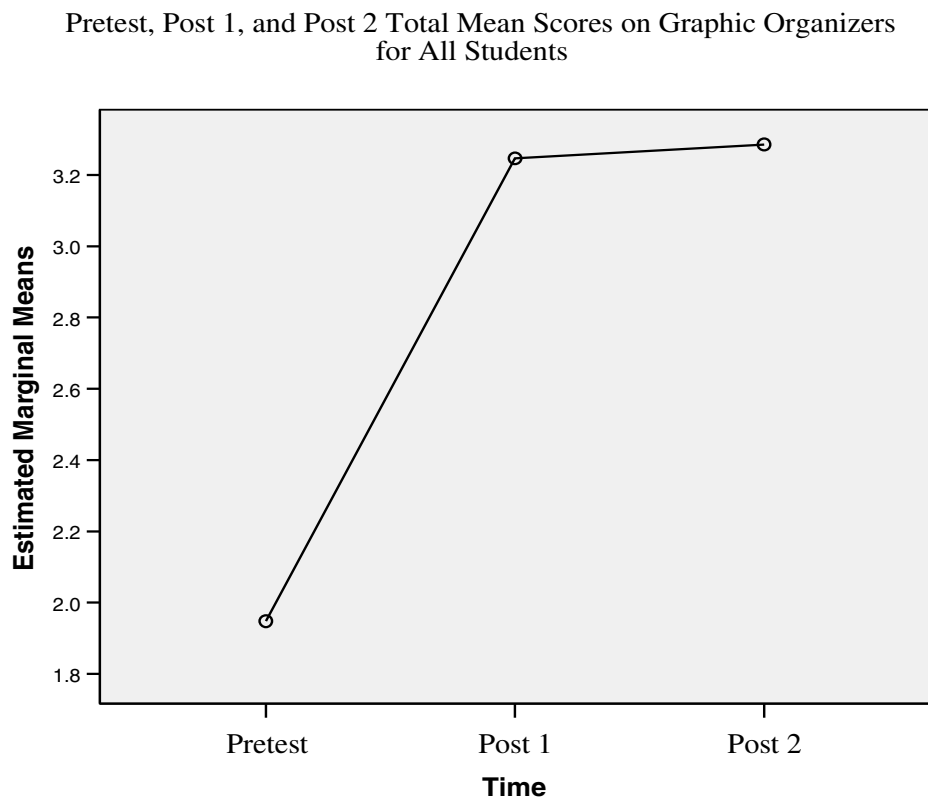
Figure 37. Total mean scores.

Again, the instruction rows and time columns on Table 13 indicate that the

intervention students' scores improved over time whereas the students' scores in the

control class remained flat, which is supported by a statistically significant Time x

Instruction linear contrast (F (1, 73) = 34.74, $p < .01$, $\eta_p{}^2 = .32$). Further, the Time x

Instruction interaction had a quadratic contrast that reached statistical significance (F (1,

73) = 5.67, $p < .05$, $\eta_p{}^2 = .07$). The line graph in Figure 38 shows this quadratic contrast,

which is also depicted in the instruction rows and time columns on Table 13. The green

line clearly displays the intervention's improvement between the Pretest and Post 1.

There was only a slight improvement between Post 1 and Post 2. In addition, the blue line

indicates the control classroom's mean for Post 1 was slightly lower than means for the

Pretest and Post 2. Finally, statistical tests supported the lack of gender differences

displayed in Table 14.

Pretest, Post 1, and Post 2 Mean Scores on Graphic Organizers
for the Intervention and Control
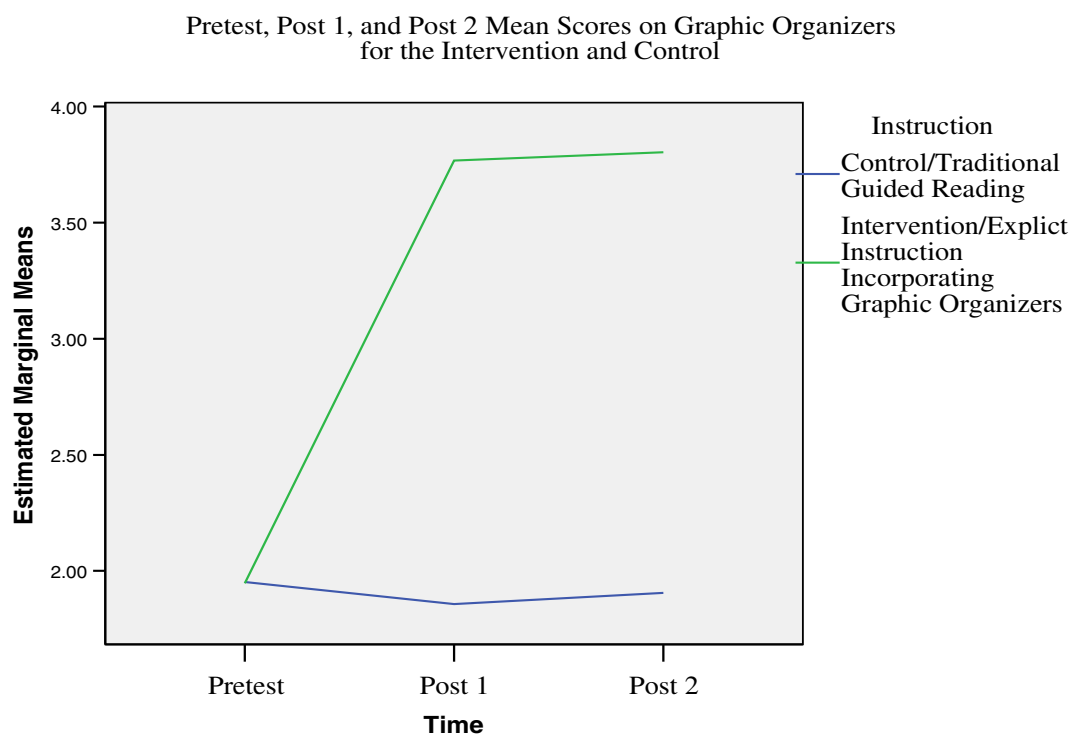
Figure 38. Mean scores on graphic organizers.

Both the descriptive statistics reported in Table 13 and the analysis of variance

reported in Table 14 demonstrated that explicit instruction incorporating graphic

organizers contributed to how well the students represented text structure graphically for

the two post tests. Students in the intervention classrooms were better able to create a

graphic organizer based on the text structure of a given text than students in the control

classroom.

Analysis of Summaries

The analysis of students' summaries first consisted of each summary receiving a

score ranging from one to five as described in the previous section. A score of one

represented "nothing from the text or incorrect information," two represented "a list of details only," three represented "one subtopic with many details," four represented "most of the subtopics and main details," and five represented "all subtopics and main details." These scores were based on the same rubric used for the graphic organizers as noted in the previous section. Next, I calculated the means and standard deviations to determine how accurately third-grade students summarized expository text. Finally, I conducted a 2 X 2 X 3 mixed ANOVA with two between subjects factors (gender and instructional group) and one within subject factor (time). The dependent variable was the summary score. Table 15 reports the means and standard deviations for the intervention and control classrooms for the three testing times. There were virtually no differences between girls ($M = 2.93$, $SD = 1.42$) and boys ($M = 2.98$, $SD = 1.46$). Table 16 is the ANOVA table for this analysis. Observed power is partial eta squared.

Table 15

Means and Standard Deviations on Summaries for Intervention (N = 56) and

Control (N = 21)

Instruction	Pretest	Post 1	Post 2	Total
Intervention	1.95 (.43)	3.93 (1.46)	3.84 (1.36)	3.24 (1.49)
Control	2.14 (.57)	2.59 (1.40)	1.82 (.39)	2.18 (.95)
Total	2.00 (.48)	3.57 (1.56)	3.29 (1.49)	

Table 16

ANOVA Table for Summaries

Source	df	MS	F	p	Observed Power
Between-Subjects					
Instruction	1	49.28	34.68	.00**	.32
Gender	1	.46	.32	.57	.00
Error	73	1.42			
Within-Subjects					
Time					
Linear	1	19.31	23.20	.00**	.24
Quadratic	1	28.50	19.66	.00**	.21
Time*Instruction					
Linear	1	35.92	43.13	.00**	.37
Quadratic	1	1.34	.93	.34	.01
Time*Gender					
Linear	1	.04	.04	.83	.00
Quadratic	1	.09	.06	.81	.00
Time*Instruction*Gender					
Linear	1	.00	.02	1.00	.00
Quadratic	1	.36	.30	.62	.00
Error (Time)	73	.83			

* $p < .05$, ** $p < .01$

Descriptive statistics show higher mean scores for the intervention classes than the control class. See the Total column on Table 15. Student means on the pretest were lower than their means on the post tests. See the Total row on Table 15. Student scores differed over time, particularly between the pre test and Post 1. Finally, the students in the intervention classes improved over time, whereas the control students did not improve. The cells in Table 15 show that pre testing means for the control students started higher than the intervention students. However, at Post 1, students in the intervention classrooms out-performed the control students. Post 2 intervention means again revealed higher scores for the intervention than the control. These means represent the effect of differences in instruction. The intervention students demonstrated gains in their ability to summarize expository text from pre test to both post tests whereas the control classroom showed a minimal to no gain.

These differences were supported by the statistical tests (See Table 16). Differences between the control and intervention classrooms were statistically significant (F (1, 73) = 34.68, $p < .01$, $\eta_p^2 = .32$). In contrast, gender differences were not statistically significant. The within subjects factor of time indicated a statistically significant linear contrast (F (1, 73) = 23.20, $p < .01$, $\eta_p^2 = .24$). This finding means that student scores increased from Pretest to Post 2 (see the Total row in Table 15). In addition, Time had a quadratic contrast that was statistically significant (F (1, 73) = 19.66, $p < .01$, $\eta_p^2 = .21$). The line graph in Figure 39 displays this contrast, which is also reported on the Total row in Table 15. The black line clearly indicates the differences on the total mean scores between Pretest and Post 2. Then, the differences between Post 1 and Post 2 were minimal.

Pretest, Post 1, and Post 2 Total Mean Scores on Summaries for All Students
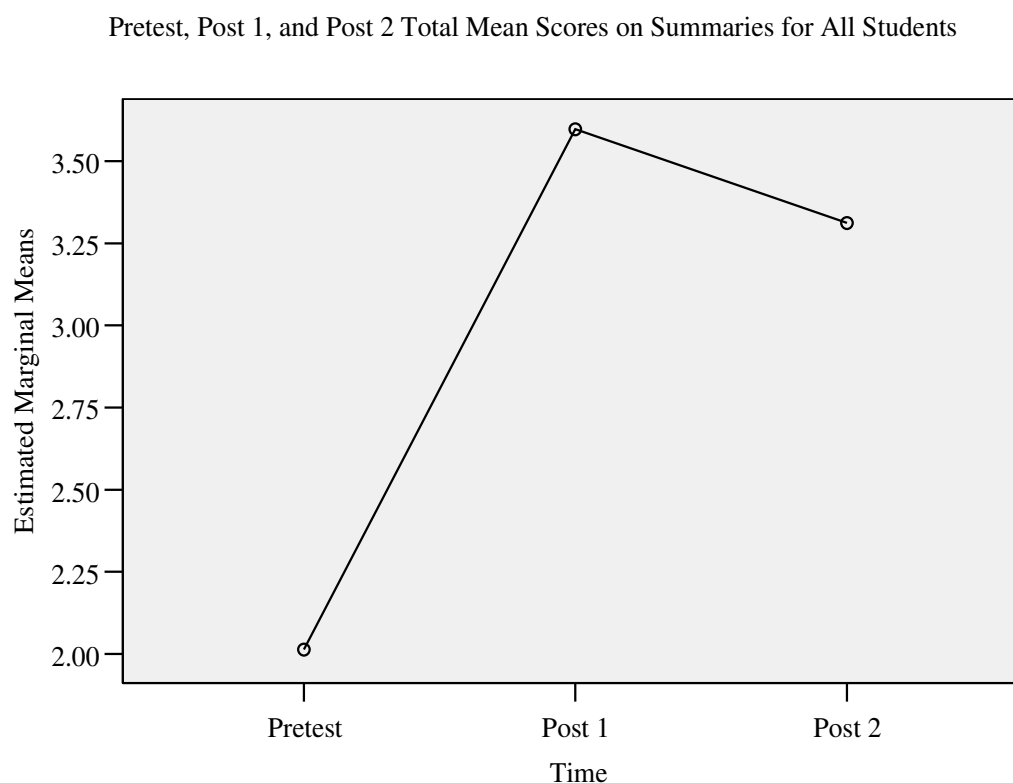
Figure 39. Mean scores for summaries.

Again, the instruction rows and time columns on Table 15 indicate that the intervention students' scores improved overtime whereas the students in the control class showed minimal improvement, which is supported by a statistically significant Time x Instruction linear contrast (F (1, 73) = 43.13, $p < .01$, η_p^2=.37). This finding means that student scores in the intervention classrooms increased from Pretest to Post 2 whereas the student scores in the control classroom showed no improvement. Finally, statistical tests supported the lack of gender differences displayed in Table 16.

Both the descriptive statistics reported in Table 15 and the analysis of variance reported in Table 16 demonstrated that explicit instruction incorporating graphic

organizers contributed to how well the students summarized expository text for the two post tests. Students in the intervention classrooms were better able to summarize an expository text than students in the control classroom.

Analysis for the Use of Graphic Organizers to Compose a Written Summary

Because I wanted to examine how explicit instruction incorporating graphic organizers with expository text affected how third-grade students used their graphic organizers to compose a written summary and how graphic organizers overall assisted students to compose a written summary, I conducted a bivariate correlation. I correlated the Post 1 and Post 2 graphic organizer and summary scores for all the classes (Explicit Instruction and Guided Reading). Table 17 depicts the bivariate correlations between the graphic organizer and summary scores for Post 1 and Post 2.

Table 17

Correlations between the Graphic Organizer and Summary Scores for Post 1 and Post 2 in All Classrooms (n = 82)

Subscale	Post 1 Sum	Post 2 Sum
Post 1 GO	.55*	___
Post 2 GO	___	.79**

The graphic organizer and summary scores correlated at a statistically significant level on both post tests. Both the intervention and control students' graphic organizers and summaries tended to co-vary. The scores co-varied because if one was low, the other was low and if one was high, the other was high. This correlation indicates

that there was a significant relationship between the use of graphic organizers to compose written summaries for all third-grade students, intervention and control. This relationship demonstrated that graphic organizers contributed to how well the students composed their written expository summaries.

Summary

Through each subsidiary research question, I confirmed that explicit instruction of expository text structure incorporating graphic organizers was effective in developing comprehension of expository text with third-grade students in comparison to traditional Guided Reading. First, students in the intervention classrooms effectively learned how to represent text structure graphically. The intervention students created organizers that contained sub-topics and details relevant to text structure. I measured this using the students' graphic organizers scores with descriptive statistics and a mixed ANOVA.

With my second subsidiary question, students in the intervention classrooms effectively learned how to summarize expository text. The intervention students composed written summaries that contained the main ideas and important details relevant to text structure. I measured this using the students' summary scores with descriptive statistics and a mixed ANOVA.

My third subsidiary question confirmed that students in the intervention classrooms effectively used their graphic organizers to compose a written summary. I measured this task by conducting a bivariate correlation between the graphic organizer and summary scores for Post 1 and Post 2.

Finally, the three subsidiary questions provided the statistical analysis to assert that explicit instruction incorporating graphic organizers was an effective intervention in

developing comprehension of expository text with third-grade students. This designed

intervention contributed to third-grade students of various reading levels improving on

reading tasks such as representing text structure graphically, using graphic organizers to

compose a written summary, and accurately summarizing expository text.

CHAPTER SIX

Discussion

An important goal of education is to develop students who can read and write

expository text (Duke, 2000). Success in work and society depends largely upon the

ability to comprehend this type of text (Duffy & Roehler, 1989; Durkin, 1993). However,

there is ample research to suggest that many children are not learning to read and write

expository text competently (Duke, 2000; Perie, Grigg, & Donahue, 2005). Chambliss

and Calfee (1998) noted, "Children's early reading experiences have prepared them

poorly for comprehending and learning from the exposition so common to content area

textbooks" (p. 119). The National Reading Panel (NRP) (2000) and the RAND Reading

Study Group (2002) suggested that effective expository reading comprehension

instruction should be a research priority.

In an effort to prepare elementary school children to develop explicit

comprehension strategies that would assist them in reading and understanding expository

text, this study examined how an expository text intervention improved third-graders'

ability to comprehend this type of text. Accordingly, I investigated how effective explicit

instruction incorporating graphic organizers was in comparison to traditional Guided

Reading in developing comprehension of expository text. As presented in Chapter 1, the

following two overall research questions with subsidiary questions guided this study:

1. How do teacher-student interactions differ between the intervention

   classrooms and the traditional Guided Reading classroom?

   a. How do the intervention teachers scaffold expository text

      comprehension?

   b. What is the ratio between teacher/student responsibility over time for the two types of instruction, explicit incorporating graphic organizers and Guided Reading?

  2. How effective is explicit instruction of expository text structure incorporating graphic organizers in comparison to traditional Guided Reading in developing comprehension of expository text as measured by written summaries with third-grade students of various reading levels?

   a. How does explicit instruction of expository text affect how third-grade students represent text structure graphically?

   b. How does explicit instruction of expository text affect how third-grade students use their graphic organizers to compose a written summary?

   c. How does explicit instruction of expository text affect how accurately third-grade students summarize expository text?

To answer these questions, I selected three third-grade classrooms for the intervention and one third-grade classroom for the control. All classrooms were in the same elementary building. In order to understand the instructional differences between the designed intervention and Guided Reading, I transcribed and analyzed the observations and the teachers and assistants' audiotaped lessons during the four instructional cycles**.** The observations and audiotaped lessons were subjected to quantitative and qualitative analysis techniques. Chapter 4 presented those results. According to a pretest-posttest control group design (Campbell & Stanley, 1963), all

scores for the summaries and graphic organizers were subjected to quantitative analysis. Chapter 5 presented those results

The following sections in Chapter 6 present a discussion of the major findings based on the two overall research questions and subsidiary questions. I discuss the first research question and two subsidiary questions in the section labeled Instructional Differences. I then discuss the second research question with three subsidiary questions in the section labeled Third-Grade Comprehension of Expository Text. In order to facilitate the discussion in this chapter, I have used specific data to answer each research question and integrated specific findings that are relevant to research and theory. The final sections of this chapter discuss strengths and limitations, directions for future research, and implications for educators followed by a conclusion.

Instructional Differences

In order to understand the overall effect of the designed intervention, I examined how the teacher and student interactions differed between the intervention classrooms and the traditional Guided Reading classroom. More specifically, I was interested in how the intervention teachers scaffolded expository text comprehension. I was also interested in understanding the differences between teacher and student responsibility over time for the two types of instruction, intervention and control. The following sections discuss these instructional differences and the effects of the teacher training.

Overall effectiveness of teacher training. The third-grade teachers and assistant in the intervention classrooms were able to effectively implement the designed instruction based on the results presented in Chapters 4 and 5. This effective implementation apparently resulted from the detailed teacher training I provided prior to the study.

In essence, the detailed training provided an opportunity for the intervention teachers and assistant to work in their "zone of proximal development" (Vygotsky, 1978). This zone allowed the teachers and assistant to use a variety of instructional processes by collaborating with peers and receiving my assistance as a more knowledgeable other. The intervention teachers and assistant learned the vital components of the designed instruction that assisted them and the intervention students to read and comprehend expository text.

In learning to identify the structure of a text and represent it graphically, the intervention teachers and assistant learned how to deliver effective expository text instruction. The training included a simplified version of the instruction that the intervention teachers and assistant would use during the study. The simplified version relied on an explicit instruction framework. This framework included ample time for me to explain, model and think aloud about the academic focus of each training phase (as described in Chapter 4). In addition, the teacher training included scaffolded instruction in the four instructional phases. By scaffolding instruction, I helped the teachers and assistant perform tasks in a more effective way than the teachers and assistant could do without such assistance (Tudge & Scrimsher, 2003; Vygotsky, 1978). Vygotsky referred to this instruction as *other-directed to self-directed* stages of learning. With each instructional phase, the teachers and assistant had an opportunity to practice the newly learned strategies. The goal of this training was to allow the intervention teachers and assistant to "internalize the knowledge in order to become independent" (Beed, Hawkins, & Roller, 1991, p. 649). This independence allowed the teachers and assistant to feel confident to deliver the designed instruction.

Finally, the intervention teacher training provided an opportunity for the teachers and assistant to become part of an interactive learning environment. This environment provided the teachers and assistant with "opportunities to actively and substantively engage in an exchange of ideas that results in the co-construction of meaning" (Gambrell, Mazzoni, & Almasi, 2000, p. 120). During the instructional phases of the training, the teachers and assistant actively discussed, constructed, and composed graphic organizers and summaries. The teachers and assistant were able to acquire the conceptualization of the designed instruction through verbal and cognitive processes. The teacher training contributed to the students in the intervention classrooms learning to identify the structure in a text, represent it graphically, use graphic organizers to compose a written summary, and accurately summarize expository text.

Scaffolded instruction. An important difference between the intervention and control instruction was the use of scaffolded instruction. As described and detailed in Chapters 1 and 2, scaffolded instruction is a vital component in developing reading comprehension (Palincsar & Brown, 1984; Wood et al., 1976). Scaffolded instruction allows students to participate in cognitive learning activities that would be difficult or impossible without such support (Bransford, Brown, & Cocking, 2000). As presented in Chapter 4, I identified common descriptors that illustrated how the intervention teachers and assistant scaffolded instruction.

I found that the intervention teachers and assistant utilized a high level of teacher modeling and thinking aloud. It is logical to assume that the intervention students in this study learned how to construct a graphic organizer and compose a written summary because they witnessed the teacher or assistant modeling and thinking aloud these exact

tasks. Thus, the third-grade students were able to comprehend expository text. This finding supports Bandura's (1977) theory on modeling and extends the work of other researchers. Vygotsky (1978) believed that a knowledgeable other, a teacher, could assist students in developing higher cognitive functions. Duffy et al. (1987) as well as Bereiter and Bird (1985) found that teachers who emphasized the physical and mental processing of reading assisted students to be more aware of what good readers do to comprehend.

In addition, the intervention teachers and assistant used accurate rhetorical pattern and graphic organizer vocabulary and explanation during scaffolded instruction. The intervention teachers and assistant explained why each expository text was a specific rhetorical pattern by using the appropriate vocabulary, description, sequence, or explanation. The teachers and assistant also explained how an appropriately matched graphic organizer, topical net, linear string, or matrix, could be used to organize the important ideas and details from the text. This finding supports and extends the work of other researchers Chambliss and Murphy (2002) found that some fourth and fifth-grade students could represent the overall structure in texts with an argument structure. Richgels et al. (1987) also found that fourth and fifth-grade students were able to organize their recalls and compositions based on their knowledge of rhetorical patterns. Once third-grade students in this study learned about rhetorical patterns, they could identify those patterns in text and then determine main ideas and details in order to construct a graphic organizer and compose a written summary.

During analysis, I found that the intervention teachers and assistant included how to determine main ideas and details into the lessons. This inclusion assisted students in becoming independent learners and improving their expository text comprehension.

Research has found positive effects on teaching main ideas when students receive an explicit instruction paradigm as compared to traditional basal instruction (Baumann, 1984). In fact, the NRP (2000) noted, "Readers acquire these strategies informally to some extent, but explicit or formal instruction in the application of comprehension strategies has been shown to be highly effective in enhancing understanding." (p. 14). In comparison, the control classroom's instruction included a focus on the facts related to an expository text during all four instructional cycles.

Further, I discovered that as the instructional cycles continued, the students in the intervention classrooms began to assume control over constructing a graphic organizer and writing a summary. The designed intervention incorporated co-authoring with the teacher and then with peers. This type of instruction is vital in developing reading instruction where students can become active learners (Pressley & Afflerbach, 1995). This finding supports and extends the importance of creating a collaborative environment in order for students to develop higher-level cognitive processes (Gambrell, Mazzoni, & Almasi, 2000; Vygotsky, 1978).

The final structure or scaffold, teacher guidance and feedback, played a role in the designed intervention. In this study, the intervention teachers and assistant provided the necessary guidance and feedback as the students in the intervention classrooms assumed more and more responsibility. For example, during Cycles 3 and 4, the intervention teachers and assistant provided guidance and feedback when a student's idea needed rewording in order to communicate an important idea or detail. Research suggests the importance of providing opportunities for students to actively and substantively

collaborate in the exchange of ideas to construct meaning (Gambrell et al., 2000; Palincsar & Brown, 1984).

In conclusion, I identified common descriptors that illustrated how the intervention teachers and assistant scaffolded instruction. These descriptors highlighted the importance of creating a formalized expository text instruction to include an interactive learning environment, explicit instruction, and scaffolded instruction. This formalized instruction created third-grade students who could develop appropriate expository text comprehension strategies that assisted them in reading and comprehending this type of text. In addition, the common descriptors highlighted the importance of creating and delivering detailed teacher training. With such training, the intervention teachers and assistant were able to become the knowledgeable other that assisted students in developing higher cognitive functions in comprehending expository text.

Teacher and student responsibility. In order to understand the differences between the intervention and control classrooms, I thought it was important to analyze the percentage of teacher and student responsibility over time. As presented in Chapter 4, there was an apparent difference between the intervention classrooms and control classroom. Teacher and student percentages for the intervention teachers and assistant revealed that teacher responsibility decreased as student responsibility increased over the course of the four instructional cycles. The intervention teachers and assistant demonstrated a gradual shift in responsibility from teacher to student (Pearson & Gallagher, 1983). By shifting responsibility from teacher to student, the intervention teachers and assistant helped their students learn how to construct graphic organizers and

compose written summaries. By scaffolding instruction, the intervention teachers and assistant helped their students perform reading tasks in a more effective way than the students could do without such assistance (Tudge & Scrimsher, 2003). This assistance echoes the notion of *other-directed to self-directed stages* of learning (Vygotsky, 1978). Researchers suggest that a gradual release of responsibility is beneficial in developing effective reading comprehension (Palincsar & Brown, 1984; Pearson & Gallagher, 1983).

In contrast, the instruction in the control classroom differed significantly compared to the intervention instruction. I found this instruction to have an event approach between teacher and learning. As Chapter 4 reported, the control instruction illustrated a consistent pattern of teacher and student responsibility during all four instructional cycles. This consistent pattern contained question and answer like instruction. This type of pattern appeared to demonstrate an event approach to reading and understanding expository text that was frozen in time.

This finding resonates with Durkin's (1978-1979) comprehension research. This research demonstrated that during reading instruction teachers were being either interrogators or mentioners. An interrogator is a teacher who presents many questions and is only concerned with the students' having right or wrong answers. A "mentioner" is a teacher who "is just saying enough about a topic to allow for an assignment related to it" (Durkin, 1981, p. 453). In this study, I found the majority of control teacher and assistant lessons demonstrated this type of reading instruction. For example, Cathy's lesson during Cycle 5 included time at the beginning of the lesson with instructions and then a lot of time dedicated to the completion of the assignment. Overall, the control

classroom contained teacher-dominated instruction, which did not assist those students in improving their expository text comprehension.

In conclusion, I have highlighted the striking difference between the two types of instruction for two reasons. First, prior to the start of the study I provided detailed teacher training as described in Chapters 3 and 4. The training included detailed explanations about specific terms related to my study, like scaffolded instruction. I presented information about this term in order for the teachers and assistant to understand the instructional framework for this study. In addition, I developed the teacher training to incorporate an abbreviated model of gradually releasing responsibility. This model allowed the intervention teachers and assistant to see first hand how responsibility can shift from teacher to student.

Second, the striking difference echoes other research and theory about importance of diminishing responsibility over time. According to this work, at the beginning of instruction, the teacher is responsible for building comprehension by including a high level of teacher modeling and explanation (Palincsar & Brown, 1984). However, as instruction continues, the teacher gradually diminishes the responsibility as the students become more and more responsible for their own comprehension. By having a knowledgeable other assist students, learning operates in the zone of proximal development as discussed in Chapter 1.

Third-Grade Comprehension of Expository Text

In order to understand the effect of the designed intervention in this study, I examined the ability of third-grade students to comprehend expository text. More specifically, I was interested in how explicit instruction of expository text affected third-

grade students' ability to represent text structure graphically**.** I was also interested in how the designed intervention affected how third-grade students used their graphic organizers to compose a written summary. Finally, I examined how accurately third-grade students summarized expository text. The following sections discuss the overall effectiveness of rhetorical pattern instruction and the role of graphic organizers in comprehending expository text with third-grade students.

Overall effectiveness of rhetorical pattern instruction. Third-grade students in the intervention classrooms were able to use their rhetorical pattern knowledge in two ways: in constructing their graphic organizers and in composing their summaries. As presented in Chapter 5, the intervention students demonstrated meaningful gains in their ability to represent text structure graphically and compose written summaries from pretest to both posttests, whereas the control classroom showed no gains.

It is important to note that even though the control students showed no gains, they were able to construct graphic organizers but not with the same capability as the intervention students. The control students constructed graphic organizers that relied on a list of details. This finding is typical of young readers because most children do not know about text structure schemata or they might know about schemata but do not know to use it. Research demonstrates that children rely on a default list to recall information similar to poor adult readers as described in Chapter 1 (Chambliss & Murphy, 2002; Cote, Goldman, & Saul, 1998). However, I found that by providing an explicit instructional framework, third-grade students were able to recall and comprehend expository text based on the text's overall structure. I propose that explicit and scaffolded instruction, teacher modeling, and thinking aloud within an interactive learning environment assisted

the intervention students to develop effective expository text comprehension strategies as compared to the control students.

This finding supports and extends theory and research about how readers comprehend expository text (i.e., Meyer, Brandt, & Bluth, 1980) and text design models (Calfee & Chambliss, 1987; Chambliss & Calfee, 1998) into the realm of explicit instruction. As described in Chapter 1, Meyer and her colleagues (Meyer et al., 1980; Meyer & Rice, 1982) examined specific strategies that would promote comprehension and memory of text. These researchers developed a comprehension model, which involves the reader using a structure strategy approach. A number of researchers suggested that good readers (Chambliss, 1995; Meyer et al., 1980) and some young readers (Chambliss & Murphy, 2002; Richgels, McGee, Lomax & Sheard; 1987) could develop the ability to use the structure strategy approach in recalling expository text. In this study, I found that the intervention students were able to construct a graphic organizer and compose a written summary for a descriptive, a sequential, and an explanation structure.

Further, research has suggested that children as young as third-grade would not be able to learn to use a structure strategy approach regardless of the type of instruction (Cote et al., 1998; Meyer et al., 1980). Chambliss and Murphy found that fourth-graders could use the structure strategy approach, but they seemed to know only one rhetorical pattern that they used with whatever they were reading. However, it is clear from my study that students as young as third-grade can comprehend expository text based on the designed instruction. This instruction provided students with opportunities to learn to represent text structure graphically, use graphic organizers to compose a written

summary, and accurately summarize expository text. The students in the intervention

classrooms apparently used the structure strategy approach to represent the overall

structure in expository text.

In addition, previous research suggested that students as young as fourth and fifth-

grade could use the structure strategy approach, but only seemed to recall information

according one rhetorical pattern (Chambliss & Murphy, 2002; Richgels et al., 1987).

However, this study indicated that explicit instruction could assist third-grade students in

gaining and using knowledge of multiple rhetorical patterns and graphic representations.

The intervention students were able to use this knowledge to construct a topical net,

linear string, or matrix graphic organizer to represent the text's overall rhetorical pattern.

This finding demonstrates the importance of the Calfee and Chambliss (1987; Chambliss

& Calfee, 1998) analysis and extends their research. In this study, I discovered that the

designed instruction, which integrated the structure strategy approach (Meyer, 1985) with

the rhetorical patterns that Calfee and Chambliss (1987) identified, assisted third-grade

students to apply complex comprehension processes with expository text.

Finally, the intervention students were able to maintain and use their knowledge

of rhetorical patterns and graphic representation even after they were no longer receiving

the explicit instruction. This study also indicated that third-grade students were able to

transfer their acquired expository text knowledge to a new text and a new situation during

both posttests. This transfer suggests that explicit instruction embedded in an interactive

learning environment played an important role in the students' ability to generalize the

instruction. The intervention students were able to apply higher levels of cognitive

processing in order to find success in comprehending expository text (Bransford et al.,

2000; Vygotsky, 1978). In addition, this transfer suggests that the designed intervention included a successful release of responsibility from teacher to students.

Use of graphic organizers. Third-grade students who received explicit instruction incorporating graphic organizers were able to construct a topical net, linear string, or matrix graphic organizer, which matched the text's overall rhetorical pattern. As presented in Chapter 5, I found that the intervention students effectively used their graphic organizers to compose a written summary. In addition, I found that all students, even the control students, used their graphic organizer to compose a written summary. The control students used the "web" as a prewriting tool. This prewriting tool could be considered a simplified version of a topical net described in this study. This finding supports research suggesting that readers can use graphic organizers to represent a text's rhetorical pattern (Chambliss & Calfee, 1998; Griffin & Malone, 1995).

Using graphic organizers as a comprehension strategy in this study did two things. First, it aided the intervention students in representing the text's overall structure. According to Griffin and Malone (1995), explicit graphic organizer instruction can assist students to develop an awareness of a writer's text structure and ultimately increase reading comprehension and learning. Second, it aided these students in composing a written summary that included sub-topics and details. Chambliss and Calfee (1998) noted that graphic organizers are a way for a reader to organize ideas presented by the author. The organizers are retrieval guides that can be used to understand the author's message. In addition, graphic organizers are concrete objects that allow young children to learn how to construct mental representations. By using the graphic organizers as described by

Chambliss and Calfee (1998), the designed intervention assisted third-grade students to learn about rhetorical patterns and improve their expository text comprehension.

Summary

The designed instruction assisted the students in the intervention classrooms to increase their expository text comprehension. This study revealed that developing students' awareness of rhetorical patterns (Chambliss & Calfee, 1998), utilizing graphic organizers (Chambliss & Calfee, 1998; Griffin & Malone, 1995), and composing written summaries are effective instructional strategies. These strategies enabled third-grade students to use a structure strategy approach and improve reading comprehension (Meyer et al., 1980; NRP, 2000). In addition, the relationship between teacher and student responsibility changed over time, not unlike the same relationship in reciprocal teaching (Palincsar & Brown, 1984). The instruction contained less teacher responsibility and more student responsibility over time, which is vital for students to learn to understand expository text on their own. Thus, an important outcome of this study was that it assisted third-grade students to "internalize the knowledge in order to become independent." (Beed, Hawkins, & Roller, 1991, p. 646).

Finally, researchers suggest the importance of creating an interactive learning environment to positively affect reading comprehension (Palincsar & Brown, 1984; Pressley et al., 1992). In this study, third-grade students in the intervention classrooms were able to learn and use comprehension strategies in an interactive environment (Palincsar & Brown, 1984) with appropriate scaffolded instruction and release of responsibility, supporting the theories of social learning and the zone of proximal development (Bandura, 1977; Vygotsky, 1978).

Strengths and Limitations

Results from this study clearly informed the research questions. However, as with any research, the research design and positive outcomes inherently presented strengths and limitations.

External and Internal Validity

The strengths and limitations of this study revolved around the trade-offs between external and internal validity. Certain aspects of this study optimized external validity while weakening internal validity and vice versa.

The instructional design of this study strengthened external validity. External validity is established when educational researchers conduct experiments within the students' classrooms (real world settings) and with their regular classroom teachers (Campbell & Stanley, 1963). This study was conducted in real third-grade classrooms with everyday expository texts and with regular classroom teachers and assistants delivering instruction during regular Guided Reading time. Further, Days 1 and 2 of the instructional cycles for both the intervention and control classrooms contained "typical" Guided Reading instruction as developed by this particular elementary school. All students read and discussed an expository text in a similar fashion as described in Chapter 3. However, as external validity was strengthened, internal validity was weakened. Internal validity is strongest when researchers are able to control variables by conducting experiments within laboratory settings. Laboratory settings allow researchers the greatest control over extraneous variables (Shavelson, 1996). In this study, a compromise of designing a real world instructional framework was the loss of control over certain variables. The real world setting with regular classroom teachers and assistants is one

example of this loss of control. Despite teacher training, the teachers in this study may not have followed my procedures exactly. By observing certain lessons during each instructional phase, I hoped to maximize treatment fidelity. However, I was unable to observe every intervention lesson due to scheduling constraints with working full-time.

Another example is that I did not have control over the choice of expository text the teachers chose for the students during each instructional phase. The teachers chose texts that matched each Guided Reading group's instructional level at that particular time of the study.

In addition, Days 1 and 2 of each instructional cycle compromised internal validity. Even though these instructional days were "typical" Guided Reading lessons for both the intervention and control classrooms, I had no strong control over the specific questions and discussion that occurred in these classrooms. Further, I was unable to randomly assign teachers to either intervention or control condition. I selected the intervention and control teachers based on the two teaching assistants' schedules as I described in Chapter 3.

Another threat to internal validity was that I used three intervention classes and one control class. This type of design was not balanced. However, I had to do that so I would not have one assistant teaching both the intervention and the control instruction.

Even though some aspects of internal validity were compromised, other aspects were enhanced. I was able to enhance internal validity by designing strong features in the measures of this study, maintaining consistency for the treatment and the control. One feature was that the pretest texts were counterbalanced with the first posttest and were randomly assigned to the participants for the pretest. Another feature that enhanced

internal validity was that I designed the pretest and posttest cycles to be identical. Both the intervention and control classroom teachers and assistants administered these tests following the same procedures. In addition, all third-grade students in this study completed the same tasks, graphic organizer and summaries, and all tasks were scored in the same manner by the expert rater and me.

Finally, there was one aspect in this study that enhanced both external validity and internal validity. During the second posttest, I decided to have the students read an instructional level text. This instructional level text enhanced external validity because of two factors. First, the text contained topics that were real world for students. Second, the regular classroom teacher chose this instructional level text. Each classroom teacher based this decision on the highest reading level that each group attained during the last instructional cycle. In addition, internal validity was enhanced because I had control over the level of the second posttest's text by specifying that it had to be an instructional level text. The texts used in the pre test and the first post test were on grade level for some of the students, but not for others. In conclusion, multiple aspects of this study optimized and compromised external validity and internal validity in a reciprocal fashion.

Other Limitations

Another potential limitation for this study was that the third-grade students, including students in the control class, already had a small number of lessons on summarizing. The students were beginning to learn what a summary was and how to compose a summary using the main ideas from a text. In this particular school, summarization was a skill introduced to third-grade students during the first marking period and reinforced throughout the school year. However, despite this early instruction,

students in the intervention showed meaningful improvement over time, whereas students in the control did not.

Finally, my conceptualization of the term, comprehension, may have limited this study. I created an operational definition of comprehension that was text-based. I viewed comprehension as extracting, constructing, and learning from expository text. Specifically, I measured comprehension by the students' ability to construct a graphic organizer with main ideas and details and to compose a written summary. I did not measure comprehension from a critical stance when analyzing the students' summaries. In this study, the students were not asked to voice their opinion about the information presented in the texts. However, this narrow view of comprehension allowed me to create a powerful expository text instructional intervention. The intervention students were able to learn how to extract, construct, and comprehend expository text at an independent level, whereas the control students could not.

Directions for Future Research

This study suggests many possible directions for future research. However, I propose a number of possible suggestions. In this section, I make one suggestion for research that would aid in better understanding the designed instruction, suggestions for research that would aid in better understanding comprehension and text design models, and a few suggestions relating to instructional strategies.

One suggestion seems clear. The designed intervention needs further study and validation. This study revealed findings that represented the scope of the participants and setting chosen for this study. The third-grade students in this study represented ethnically and linguistically homogeneous groups. These students lived in a rural setting within a

close distance to a major mid-Atlantic city. However, questions about whether the

designed intervention would be effective under different circumstances must be

answered. It would be valuable to determine whether the designed expository text

intervention would be successful under varied conditions such as other grade levels, other

teachers and professionals, and different educational settings. Students of all ages and

backgrounds need instruction that will enable them to comprehend expository text

(Simmons, Griffin, & Kameenui, 1988).

My second suggestion is the further study of expository text comprehension

models. Previous research demonstrated that readers who use a structure strategy

approach have the ability to know and use a set of text structure schemata used by authors

to organize ideas found in their texts (Meyer, 1985; Meyer et al., 1980). In this study, I

found that the intervention students were able to learn and utilize a structure strategy

approach in order to construct a graphic organizer and compose a written summary. This

finding coincides with other research. Russell (2005) found that text structure instruction

assisted adolescent struggling readers to both comprehend expository text and retain

content knowledge. However, it is imperative for further research to determine the full

effects of a structure strategy approach with students of all ages, even younger than third-

grade.

The third suggestion I make is the further study of rhetorical patterns and graphic

representations, such the Calfee and Chambliss (1987) and Chambliss and Calfee (1998)

text design framework in direct relationship with instruction. This study leads to

preliminary findings that the designed instruction assisted the intervention students to

identify and learn multiple rhetorical patterns such as description, sequence, and

explanation. This knowledge enabled the intervention students to effectively construct a graphic organizer and compose a written summary. Although, questions whether the designed instruction would be effective with different rhetorical patterns, such as the important argument pattern, must be answered. Comparative research with a variety of rhetorical patterns would provide more insight on how to promote these patterns as tools for teaching and learning.

The fourth suggestion I make is the further study of utilizing thinking aloud as an instructional strategy. I found that thinking aloud by the intervention teachers and assistant to be a valued component in the designed instruction. The intervention teachers and assistant used this strategy to convey those mental processes used when reading and comprehending expository text. However, did third-grade students in the intervention classrooms internalize this overt, verbal expression of expository text comprehension? Think aloud research with third-grade students and other students would develop a better understanding on how students internalize the instructional framework used in this study to become independent readers.

The final suggestion is that additional classroom observations be conducted during the instructional cycles. I was limited in the number of classroom observations I was able to make because I was working full time during the collection of data. Additional classroom observations would allow the researcher to gather more data on teacher and student responsibility, scaffolded instruction, and treatment fidelity. The observations could also provide additional data to evaluate the instructional differences between the two types of instruction, explicit instruction incorporating graphic organizers, and Guided Reading.

Implications for Educators

This study developed an instructional strategy, explicit instruction by incorporating graphic organizers, which assisted elementary students to comprehend expository texts. Results of this study revealed several implications for educators in developing appropriate expository text instruction. One such implication appears the most obvious. Explicit instruction was particularly effective in assisting students to learn about rhetorical patterns, construct graphic organizers, and compose written summaries. Other researchers have also made this suggestion. Researchers have recommended that expository text instruction should include explicit instruction in order to develop expository text comprehension strategies (Duke, 2000; NRP, 2000; RAND Reading Study Group, 2002). Teachers across all grade levels and subject areas could be delivering explicit instruction in order to influence reading comprehension and teacher effectiveness.

One such instructional strategy that seemed to be particularly effective was teacher modeling and thinking aloud. Teachers could use modeling and thinking aloud to provide students with the processes necessary for learning, attention, retention, and reproduction (Bandura, 1977). Results of this study indicated that third-grade students in the intervention classrooms were able to effectively construct a graphic organizer and compose a written summary because their teachers delivered instruction that included both modeling and thinking aloud. Research demonstrates that teachers who explicitly explain and model the processes associated with reading strategies overtime will gradually increase students' text understandings (Duffy et al., 1987). In this study, teacher modeling and thinking aloud seems to have been an effective instructional

strategy for improving students' ability to comprehend expository text and improving reading instruction. Note, though, that the separate features of the instruction were not manipulated in the study. Students in the intervention experienced them as a package.

Graphic organizers could also be used as an instructional strategy to assist students to determine and organize a text's main ideas and details (Chambliss & Calfee, 1998). Additionally, graphic organizers may allow students to visually represent information into smaller chunks within content-area texts (Calfee & Chambliss, 1987; Meyer, 1985). In many classrooms of today, graphic organizers are typically called "webs" and decorate many classrooms walls. These webs are used to organize the content, and which are typically identical in appearance regardless of the rhetorical structure of the text. In contrast, the graphic organizers used in this study were very different. Each graphic organizer was constructed to match the rhetorical structure of the text. Results indicated that graphic organizers assisted students to isolate important information, obtain the author's message, and see the connections between concepts to write a coherent summary (Dunston, 1992). Content-area teachers could use this strategy to aid in the learning of content information, which can be a challenge for students (Calfee & Chambliss, 1987).

Second, assisting young students to become active learners in an interactive learning environment is important. In many classrooms of today, the learning environment includes very little teacher and student collaboration (Forman & Cazden, 2004). This type of environment involves question and answer instruction as depicted in Durkin's (1978-1979) comprehension research. However, this study suggests that expository text instruction must take a different approach. Expository text instruction

should lead a student's cognitive development by working in a students' zone of

proximal development (Vygotsky, 1987). Research suggests that instruction, which is

reciprocal nature, could influence a student's cognitive development and reading

comprehension (Palincsar & Brown, 1984). In this study, the designed intervention

increased third-grade students' application of reading strategies by including a great deal

of teacher and student interactions. This type of interactive learning environment enabled

the intervention students to negotiate their understanding of expository text.

Within an interactive learning environment, scaffolded instruction is a vital

component to assist students to become active in their cognitive development. As

presented in Chapters 1 and 2, scaffolded instruction assists students to perform some

task or skill in a more effective way than the students could do without such assistance

(Tudge & Scrimsher, 2003; Vygotsky, 1978). During scaffolded instruction, teachers

gradually release responsibility to their students (Pearson & Gallagher, 1983). Results of

this study indicated that the intervention instruction contained less teacher responsibility

and more student responsibility over time. By assuming more responsibility, the third-

grade students in the intervention classrooms were able to construct a graphic organizer,

compose a written summary, and ultimately comprehend expository text. Through

scaffolding, students can learn how to become independent learns of expository text.

Third, this instructional framework could be used with struggling readers of

various ages to assist in reading and comprehending expository text. Even though

struggling readers notably have phonological deficits (NRP, 2000), these readers also

struggle with comprehension and the lack of strategies to assist them in this matter

(Snow, Burns, & Griffin, 1998). This study utilized real classroom expository texts with

students of all reading abilities. Teachers could use this framework not only to develop expository text comprehension, but also to assist students in developing an organization for any type of expository writing (Brown, Day, & Jones, 1983).

Finally, detailed teacher training is an important asset in developing effective expository text reading instruction. In many educational settings of today, teacher training includes very little time, the assistance of a knowledgeable other, and the opportunity to practice the newly learned instruction. As presented in Chapters 3 and 4, the detailed teacher training allowed the intervention teachers and assistant to learn specific terms and concepts and construct graphic organizers. In this study, I had three teachers and an assistant who learned how to make the instruction that I had designed work. Results of this study indicated that the intervention students were able to comprehend expository text from the designed instruction. By spending time carefully training teachers, educational systems could assist teachers to deliver new instructional strategies or programs that influence students' cognitive development.

Conclusion

A reasonable first step in helping elementary students comprehend expository text is to design appropriate expository text instruction. By using qualitative and quantitative analysis, this study examined the effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of third-grade students. The results indicated that the designed intervention was effective for third-grade students to read and comprehend expository text.

This study demonstrated the success of an expository text intervention at the elementary level. Elementary administrators and teachers need to make expository text

comprehension instruction a priority for their students. This instruction must include a strong focus on rhetorical pattern knowledge combined with explicit and scaffolded instruction within an interactive learning environment in order to begin to develop elementary students as active and independent learners of expository text.

Appendix A

Expository Text Taxonomy

Inform: To present attributes or events

Argue: To present evidence for a claim

Explain: To fill a gap in understanding from a novice to an expert

Description

Sequence

List

Linear String

Topical Net

Matrix

Description

Sequence

Topical Net

Linear String
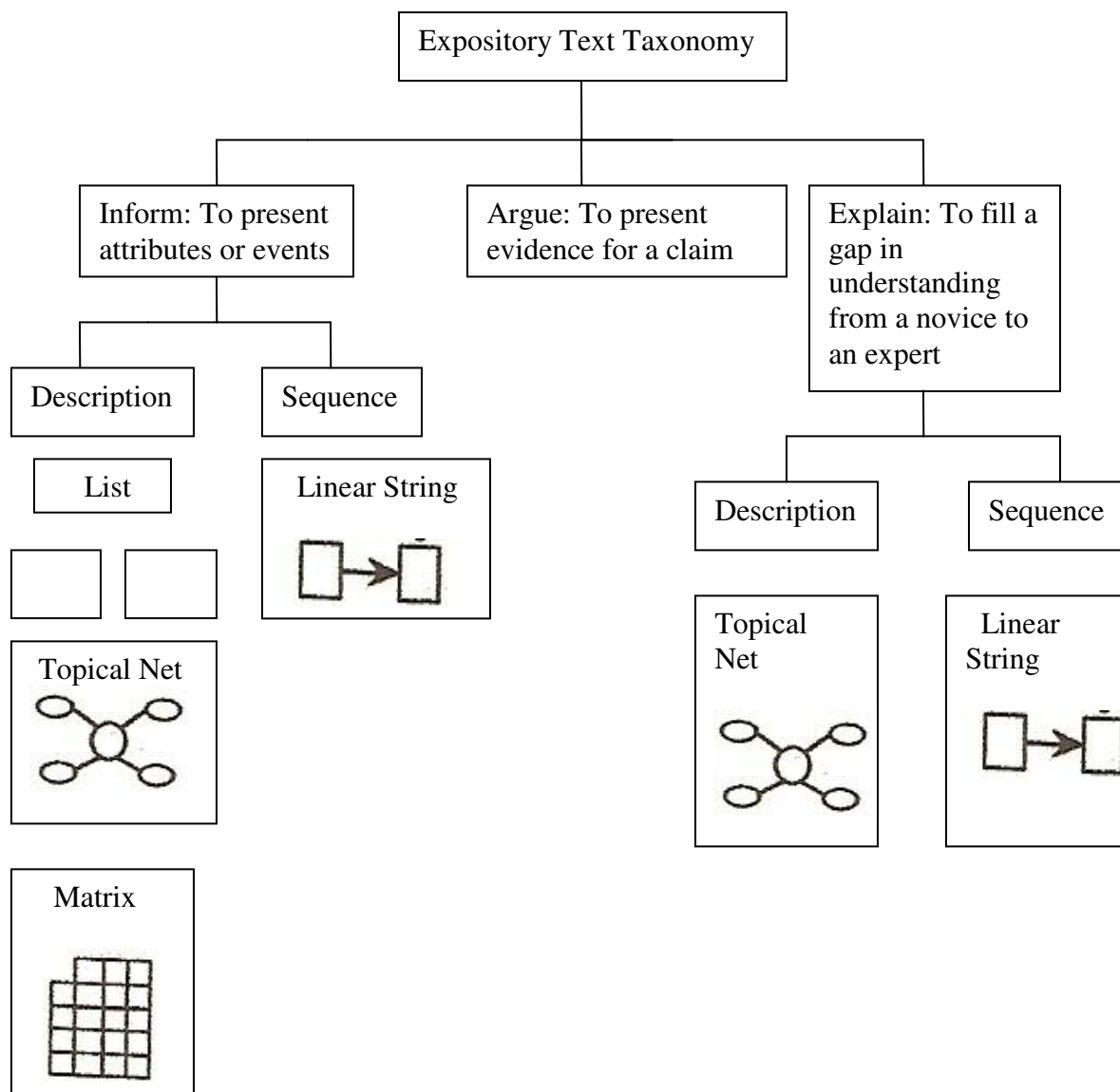
Adapted from: Chambliss, M. J., & Calfee R. C. (1998). *Textbooks for learning: Nurturing children's minds*. Malden, MA: Blackwell Publishers.

Appendix B

Pilot Study

Introduction

In order to comprehend written or spoken material, a reader must engage in a cognitive process that integrates skills and strategic processes (National Reading Panel, 2000). According to the RAND Reading Study Group (2004), this cognitive process occurs when a reader extracts and constructs meaning through interaction and involvement with material. All students must be able to comprehend in order to retain and recall information from expository text, the type of text used to communicate ideas in social studies, science, math, and other content areas (Chambliss & Calfee, 1998). This skill becomes difficult when a student is not familiar with the text structure of a given text. While young children learn to comprehend narrative text quite readily, they typically struggle with exposition (Kucan & Beck, 1996).

Researchers have shown that reading instruction that develops students' awareness of text structure schemata and incorporates graphic organizers increases their comprehension (Armbruster & Armstrong, 1992; Boothby & Alvermann, 1984; Griffin & Malone, 1995; Meyer, Brandt, & Bluth, 1980; McGee, 1982). Richgels, McGee, Lomax, and Sheard (1987) demonstrated that sixth-grade students who possess knowledge about text structures can organizer their recalls based on the author's overall structure. McGee (1982) found that fifth-good readers recalled more total ideas when using a structure strategy approach (text structure schemata). In addition, Chambliss and Murphy (2002) revealed that some fourth –and fifth-grade students could construct a representation of an argument text structure following the author's pattern. However, the participants in the

previous studies were older students, and the present pilot study analyzed the findings with a third-grade population.

The purpose of my pilot study was to prepare for my dissertation. I explored approaches to teaching young children to comprehend exposition. The following three research questions guided this pilot study:

1.   How effective is explicit instruction in developing comprehension of expository text with third-grade students as measured by their written summaries?

2.   To what extent do third-grade students use their graphic organizers to compose written summaries of text?

3.   How accurately are third-grade students able to represent text structure graphically?

Method

Participants

The participants were 20, third-grade students in one elementary school classroom. However, three students were unable to complete the posttest due to unforeseen illnesses. Consequently, the elimination of their previous data occurred at the conclusion of the study.

This particular district was located in the Mid-Atlantic region of the U.S. The elementary school is part of a small rural community. In this particular elementary school, there were seven, third-grade classrooms ranging in class size from 20-24 students. Two of the classrooms were high average with students reading slightly above grade level, so these classrooms did not participate in the study. Another classroom did

not participate due to containing Learning Support students with Individualized

Education Plans. These plans explained the specific type of instruction needed for each

student to be successful in third-grade for all subject areas. The remaining four

classrooms contained students with mixed abilities. The principal grouped these students

heterogeneously before the beginning of the school year.

At the time the pilot study occurred, I was a Reading Specialist in this school. My

teaching focus was working with all third-grade classrooms. I briefly described the study

to the remaining four teachers, one teacher did volunteer. In addition, the teaching

assistant in this classroom agreed to be part of the study.

Based on a child's reading level in this particular classroom, the teacher placed

him or her into homogeneous reading groups at the beginning of the year. The students'

reading levels ranged from the end of second grade to about mid-third grade based on the

children's Guided Reading level at the end of second grade and the Qualitative Reading

Inventory– III word list test that each child received in the fall of third grade. This word

list test consisted of 20 third grade words that every third grade student in the building

read. Then, based on the child's word list score and the end-of-the-year reading level, the

teacher placed the child into one of four Guided Reading groups in the classroom. These

groups have experienced some fluctuation in students moving into a higher or lower

group. For the most part, groups have remained relatively the same since the beginning of

the year.

In this particular classroom, Guided Reading was on a six-day cycle with students

placed into four small groups based on ability. Within that six-day cycle, students

received instruction based on each student's instructional reading level from the

classroom teacher or teaching assistant. The instructional period lasted for 20 minutes. In addition, one group of children was considered Title I by the district and received an additional 30 minutes of supplemental reading instruction by the Reading Specialist. The Title I students received the same instruction as the other students in the classroom during their Guided Reading time with the teacher or teaching assistant.

Before the start of the study, I gave a letter of consent to the teacher and teaching assistant and sent parental permission forms home to the subjects' parents. (See Appendix 1 and 2) In addition, I read the Assent Form to the class and asked each third grader to print his or her name for consent. (See Appendix 3)

Materials

In this particular elementary school, the teachers utilized a reading program called Rigby Literacy Series by Harcourt Achieve (2002). Within that series, a Guided Reading component consisted of narrative and expository texts. There were 20 expository texts at the third-grade reading level. Table I notes each expository text and author. I analyzed each expository text to determine text structure and graphic organizer representation as described by Meyer (1975, 1985) and Chambliss and Calfee (1998). I discovered that 15 of the 20 expository texts used in third-grade had a descriptive text structure described by Meyer (1975, 1985) and a topical net graphic organization described by Chambliss and Calfee (1998) (See Table 2).

I chose four expository texts based on the reading level of the students during the third-marking period of their school year. Those texts were: *Using the River, Perfect Paper, Pathfinder: Mission to Mars, and Horses of the Sea.*

Table 1

Third-grade Rigby expository texts and author

_____

Level/Title   Author

_____

Level 16

Count on Your Body   Kurt Baze

A View from Above   Glenn Norris and Diane Cox

Paper Crunch   Karen Rogers and JoAnne Alexander

Level 17

Towers   Pamela Rushby

Jane Goodall: Living with

the Chimpanzees   Annie Ortiz and Denise Ferrell

A Trip Through the Airport   Andrea Rains

Using the River   Claire Llewellyn

Lizards and Snakes   Rod Theodorou and Carole Telford

Level 18

Perfect Paper   Robin Kearney

Horses of the Sea   Carol Hosking

Sports Matter: A Magazine for Kids Michael McGuffee

Moon Journal   Karen Rogers and Diane Cox

Pathfinder: Mission to Mars   Karen Rogers

Level 19

The Arctic Food Web	Keith Pigdon and Marilyn Woolley
Pueblo Ruins	Laura Husar
Artful Stories	Jude Tolar
Encyclopedia of the Rain Forest	Carol Hosking
Chasing Tornadoes	Michael McGuffee and Kelly Burley

Level 20

Antarctica: The Last Great Wilderness	Coral Tulloch
Connecting to the Internet	Chris Mosner

Table 2

Classification (text structure and graphic organizer) for each third-grade Rigby expository text

Text	Text Structure	Graphic Organizer
Count on Your Body	Description	Topical Net
A View from Above	Description	Topical Net
Paper Crunch	Description	Topical Net
Towers	Description	Topical Net
Jane Goodall: Living with the Chimpanzees	Sequence	Linear String
A Trip Through the Airport	Sequence	Linear String
Using the River	Description	Topical Net
Lizards and Snakes	Description	Matrix

Perfect Paper	Description	Topical Net
Horses of the Sea	Description	Topical Net
Sports Matters: A Magazine		
for Kids	Description	Topical Net
Moon Journal	Description	Topical Net
Pathfinder: Mission to Mars	Description	Topical Net
The Arctic Food Web	Description	Matrix
Pueblo Ruins	Description	Topical Net
Artful Stories	Description	Topical Net
Encyclopedia of the Rain		
Forest	Description	Topical Net
Chasing Tornadoes	Sequence	Linear String
Antarctica: The Last		
Wilderness	Description	Topical Net
Connecting to the Internet	Description	Topical Net

Design and Procedures

Two instructional approaches can help students learn how to organize ideas and comprehend expository text. First, teachers can help students become aware of the text structure utilized by the author (Pearson & Camperell, 1994). Second, teachers can use graphic organizers to highlight the structure in the text. Graphic organizers allow readers to clarify the meaning of a text and help them to generate a summary based on comprehension and recall of important ideas (Hidi & Anderson, 1986). Students can use

graphic organizers as a way to organize the information presented by the writer (Dunston, 1992). Thus, by organizing this information into a visual representation, students will become aware of the writer's text structure and ultimately increase their ability to comprehend a text and write a summary of it.

According to Bandura's (1977) social learning theory, children may learn best when behaviors are modeled for them. In this pilot study, the teacher and teaching assistant used a think-aloud strategy to model their thinking as they were taking the ideas in the text and representing them graphically. Subsequently, children practiced the strategies that their teacher modeled (Block, 2004).

Teacher and Teaching Assistant Training. Two weeks before the study, I described the instructional plan to the classroom teacher and assistant. I met with the teacher and the teaching assistant in the teacher's classroom for three half-hour meetings. The meetings occurred before the start of the school day. I explained to the teacher and assistant that I developed instruction for third-grade students who would be reading descriptive expository texts. In addition, the students would be learning how to create a topical net graphic organizer based on the subtopics and important details in the text. I chose the text structure and graphic organizer based on my analysis of each expository Guided Reading book.

I modeled for the teacher and teaching assistant how to complete a topical net graphic organizer. In addition, I demonstrated how to utilize the think aloud process properly (Oster, 2001). Table 3 outlines this instruction.

Table 3

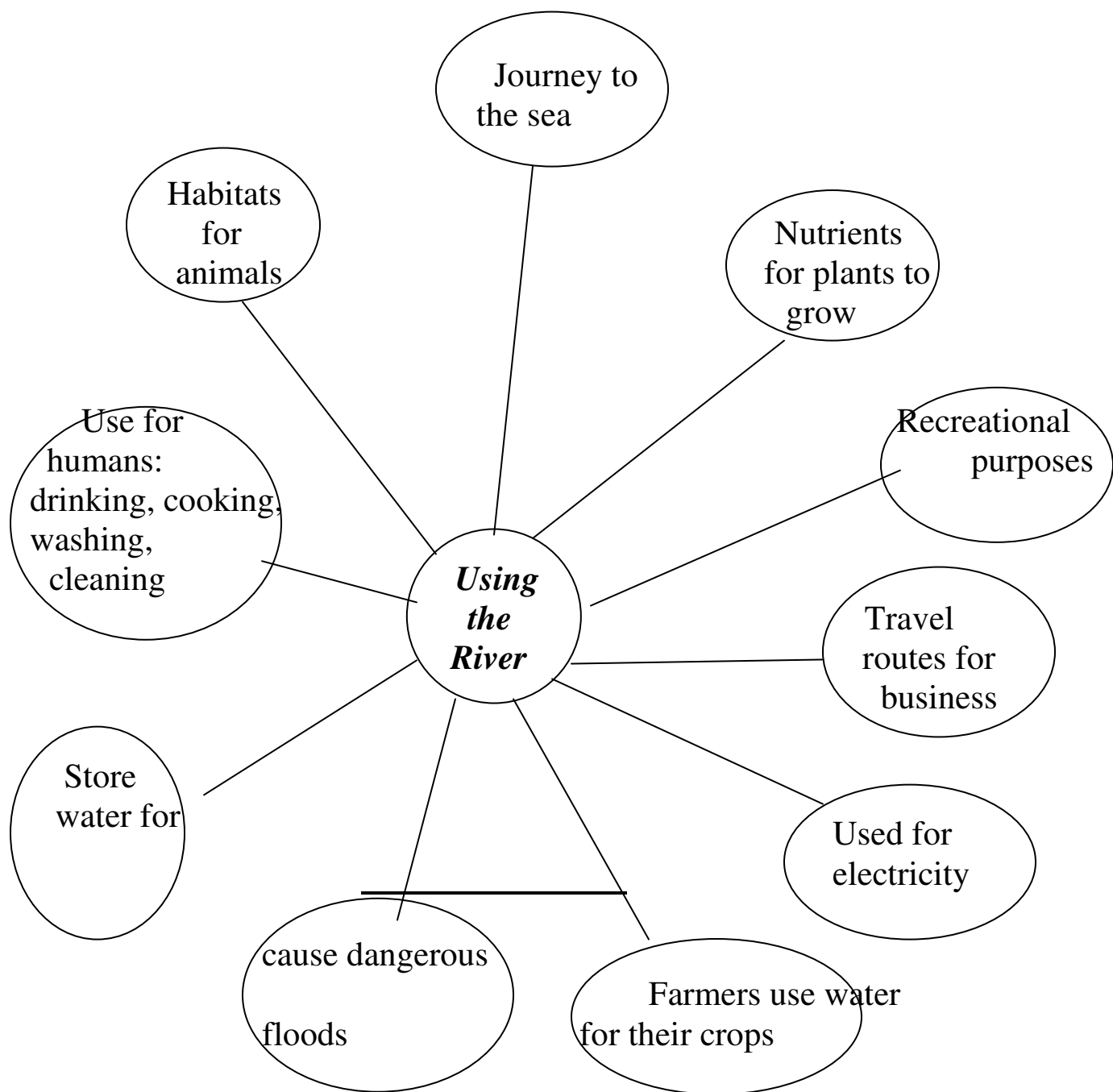*Training sessions for the teacher and teaching assistant*

Session	Task
First Session	1. I delivered instruction to the teacher and assistant on text structure awareness and the purpose of graphic organizers. 2. I shared the descriptive, topical net Rigby texts. 3. I explained how these books match a descriptive structure and a topical net graphic organizer.
Second Session	1. I used the text, *Using the River*, as a model. 2. I completed one half of the graphic organizer by using a think aloud process. (See Figure 1) 3. The teacher and assistant began to realize how the essential ideas of the text are represented on the organizer. (Hidi & Anderson, 1986)
Third Session	1. The teacher and assistant completed the other half of the organizer with guidance from me. (See Figure 2)

Figure 1

Using the River   Level 17
Description/Topical Net

Teacher Version

Student Instruction. Instruction commenced after the teacher training sessions occurred. The teacher and teaching assistant delivered the instruction to the students during their Guided Reading time. According to Fountas and Pinnell (1996), Guided Reading is part of a teacher's balanced literacy approach that enables children to use and develop effective reading strategies. This approach provides an opportunity for students to read a variety of texts and practice strategies for oral reading and comprehending while working in small groups. The teacher is responsible for choosing an appropriate text and supporting the children before, during, and after reading (Fountas & Pinnell, 1996).

The instruction consisted of four different cycles: pretest, cycle two, cycle three, and posttest. The pretest occurred during the first 6-day cycle. For the first four days, the students were in small Guided Reading groups reading the text and completing other activities as directed by the teacher. Students read *Using the River* that contained a descriptive text structure. After those four days, the teacher kept the students in a whole class setting and asked the students to write a summary about the text. The teacher reminded the students that it could be easier to write a summary by using a web organizer as described by their 2nd grade teachers. In this particular district, the 2nd grade teachers utilized web organizers during the brainstorm process of writing. Therefore, this type of organizer would be familiar to most of the students in this class. I collected the summaries to analyze for comprehension.

The second 6-day cycle involved the teacher and assistant modeling and thinking aloud the process of completing the graphic organizer with essential information from either *Perfect Paper* or *Pathfinder: Mission to Mars* in each of the four Guided Reading groups. In each Guided Reading group, the teacher or assistant created an organizer on
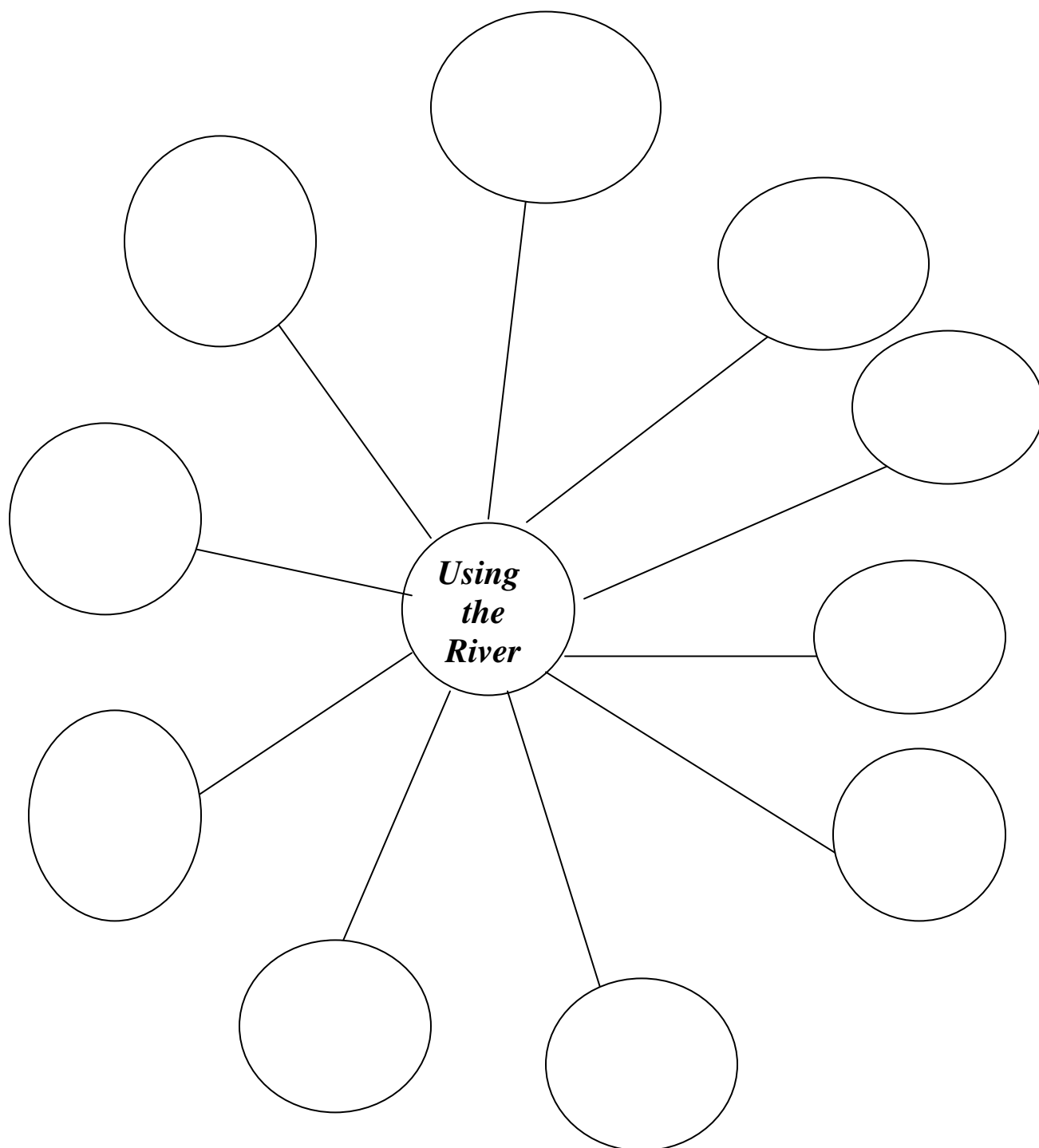
large poster board in order for each student to see the creation of the topical net graphic

organizer (see Figure 2). At the end of the cycle, the students used that graphic organizer

to write a summary about the text.

Figure 2

Using the River   Level 17
Description/Topical Net

Student Version

The third 6-day cycle was guided practice for the small groups. Again, the students read either *Perfect Paper or Pathfinder: Mission to Mars*, which were descriptive in text structure and completed a topical net graphic organizer with guidance and support from the teacher or assistant. The students also wrote a summary during this cycle by using their group's graphic organizer for the particular expository text.

The fourth 6-day cycle was the posttest. All students read *Horses of the Sea* during the first 2 days of the guided reading block. Then, each student independently created a topical net graphical organizer and wrote a summary of the text in a whole class setting.

Table 4 illustrates the type of activities and instruction that occurred on each day of each cycle for the teacher, teaching assistant, and students:

Table 4

Description of activities and instruction for each guided reading cycle

_____

6-Day Cycle	Instruction

_____

First Cycle	Days 1 and 2: Teacher and students read and discussed *Using the River* in Guided Reading Groups
	Day 3: Teacher asked the students comprehension questions
	Day 4: Teacher individually assessed the students' oral reading ability by using Running Records while the other students reread the text
	Days 5 and 6: Students wrote a summary about the text based on using a web organizer (pre-test)
Second Cycle	Days 1 and 2: Teacher and students read and discussed either *Perfect Paper* or *Pathfinder: Mission to Mars*
	Day 3: Teacher/assistant described the text structure to the students
	Days 4 and 5: Teacher/assistant modeled how to complete graphic organizer by using a think aloud process
	Day 6: Students wrote a summary based on information from graphic organizer

Third Cycle	Days 1 and 2: Teacher and students read and discussed either *Perfect Paper* or *Pathfinder: Mission to Mars*
	Day 3: Students started graphic organizer with guidance from the teacher/assistant
	Days 4 and 5: Students completed graphic organizer with guidance if necessary
	Day 6: Students wrote a summary based on information from the graphic organizer
Fourth Cycle	Days 1 and 2: Teacher and students read and discussed *Horses of The Sea* in Guided Reading groups
	Day 3: Students began to create own graphic organizer (independent work, whole class setting)
	Days 4 and 5: Students finished graphic organizer
	Day 6: Students wrote a summary about the text with aid from their graphic organizer (post-test)

Observation. In order to assure the delivery of instruction, I conducted one observation of the classroom teacher. This observation occurred on Day 4 of the second cycle. I focused on the modeling of the graphic organizer and the think aloud process of the teacher.

This observation involved the teacher continuing her discussion on how to create a topical net graphic organizer by using the most important ideas from the text, *Pathfinder: Mission to Mars*. The teacher had a small group of six children sitting

around a kidney shaped table to conduct this Guided Reading lesson. Each student had a copy of the non-fiction text in his/her hand.

Data Analysis

    Summaries/Graphic Organizers. As noted in Table 4, students wrote a summary for each expository text they read during the four cycles of Guided Reading. The first cycle was the pretest and the fourth cycle was the posttest. The purpose of collecting the summaries was to monitor the students' comprehension from beginning of the study to the end (Palincsar & Brown, 1983). Before I analyzed the pretest and posttest summaries, I created a topical net template for each expository text read during each Guided Reading cycle.

    Next, I converted each summary into a visual representation to determine if the student utilized some form of organization in his/her summary (Chambliss & Murphy, 2002). I categorized each visual representation with a score from one to five. Each score represented an alignment to the template: 1) nothing from the text, 2) a list of details, 3) one subtopic with related details, 4) topic plus most of the subtopics with related details, and 5) topic plus all of the text's subtopics with related details. I analyzed these scores using descriptive statistics (means and standard deviations).

    In addition, I categorized each student's graphic organizer created during the pretest and posttest. Using the identical scoring method as the summaries, each graphic organizer's score represented an alignment to the template of each non-fiction text used during the pretest and posttest.

    Observation. I transcribed the teacher observations in order to determine if the teacher was using the designed instruction during the second cycle of the intervention.

The observation contributed to the validation of the study that the designed instruction did occur during Guided Reading time. In addition, the observation provided insight about explicit instruction, modeling, and think alouds.

Results

Summaries

The first research question was to determine how effective explicit instruction is in developing comprehension of expository text with third-grade students as measured by their written summaries. Table 5 presents the means and standard deviations of both the pretest and posttest summaries.

Table 5

Means and standard deviations on graphic organizers and summaries for the pretest and posttest

Measure	Pretest (1-5)	Posttest (1-5)
Graphic Organizers	2.2 (.562)	4.47 (1.00)
Summaries	2.41 (.870)	2.94 (.966)

n = 17

Differences in the means suggest that third-grade students showed growth in their ability to write a summary of an expository text. For the posttest, students wrote summaries that included the topic and more subtopics and details as compared to the pretest summaries. These results indicated that explicit instruction is effective in developing comprehension of expository text. However, a combination of the small

number of students and the size of the standard deviations suggests that these outcomes probably would not be statistically significant.

The second research question was to what extent third-grade students use their graphic organizers to compose written summaries of text. In order to answer this question, I conducted a Pearson's Correlation test using the posttest graphic organizer and summary scores. Table 6 presents this correlation.

Table 6

Correlation of the posttest graphic organizer and summary scores

Measure	Posttest Graphic Organizers	Posttest Summaries
Posttest Graphic Organizers	1	.480
Posttest Summaries	.480	1

n = 17

As can be seen, this analysis did not find a strong relationship with students using their graphic organizers to compose written summaries of text. This finding indicates that a combination of a larger number of students and need for a longer instructional time would be necessary for my dissertation. A longer instructional time would assist students in learning how to use their graphic organizer to write better summaries.

The third research question was to determine how accurately third-grade students are able to represent text structure graphically. Table 5 presents the means and standard deviations on the graphic organizers for both the pretest and posttest.

On the graphic organizer measure, third-grade students improved from an average of 2.24 on the pretest to 4.47 on the posttest. This high posttest score appeared to indicate that third-grade students were aware of text structure and could accurately represent the information in a topical net organizer.

Observation

A prominent theme seemed to appear during my analysis of the observational notes. On many occasions, the teacher utilized a think aloud process. She described to the students how to determine what information to write on the topical net graphic organizer. At the beginning of her lesson, she instructed the students to open their books to Chapter 3. As the students were doing this task, the teacher proceeded to say, "In order to have accurate information, if I were doing this all by myself, I would reread that section or at least skim it to find the most important thoughts." The teacher described her own thinking process to determine important information within one of the subtopics. The lesson continued with the teacher describing what information should be placed onto the organizer by saying, "I am going to put the main ideas of this chapter around the chapter name. The first thing that comes to my mind about naming a rover was the fact that it was a contest." Then, she wrote "contest" as a detail about the subtopic, Naming a Rover. The teacher continued her think aloud by saying, "I remember at the bottom of page 6 it said about Sojourner the rover would be seeking the truth about Mars." At this point of

her think aloud, she asked the group to clarify this detail as being important to the subtopic and the group agreed that it was.

The group moved into the next chapter where the teacher had a short discussion on what it meant to skim a page of text. She utilized this particular discussion in the following think aloud, "After I had skimmed it, my first thought for this particular chapter would have been that it needs to be protected for the landing." Then, she wrote that information onto the web next to the appropriate subtopic.

As this lesson neared the conclusion, the teacher and students completed the last section of the book for the day. She directed the students to skim that section as she did the same. She then continued by saying, "As I skimmed through my page, I know I need to be looking for ideas that are most important to landing. The first thing that comes to my mind is that it needs a heat shield."

It becomes evident from the above statements that the teacher is carefully trying to instruct the students on reading a passage and then determining what is the important information about that subtopic. In utilizing a think aloud process, this teacher was modeling to the students how to determine important details within a subtopic of a descriptive expository text.

Discussion

Young children typically learn to comprehend narrative text quite readily. However, they struggle with expository text because they are not familiar with the text structure (Kucan & Beck, 1996). Researchers have shown that reading instruction that develops students' awareness of expository text structure and incorporates graphic organizers increases their comprehension (Armbruster & Armstrong, 1992; Griffin &

Malone, 1995; Richgels, McGee, Lomax, & Sheard, 1987). However, the participants in this research were older students, and the present study chose to examine a third-grade population in order to expand the research base.

From the results of this pilot study, I concluded that explicit instruction, which incorporates text structure and the use of a graphic organizer, is beneficial for third-grade students to comprehend expository text. During the instructional period, third-grade students improved their written summaries of an expository text by including most to all subtopics with details. Therefore, the students were able to comprehend a descriptive text structure in order to summarize the text.

Explicit instruction allowed the teacher and teaching assistant the opportunity to discuss the text structure of the text and model how to use that text structure in creating a topical net graphic organizer. By using this particular instructional intervention, third-grade students created their own topical net graphic organizer that closely matched the author's text structure after reading an expository text.

In conclusion, these findings suggested that explicit instruction, which incorporates text structure and graphic organizers, could provide assistance for third-grade students to independently write a summary, create a topical net graphic organizer, and comprehend an expository text. For the purposes of my dissertation, I plan to increase the time in which the teacher and teaching assistant model, think aloud, and provide guided practice. In addition, I will increase the number of third-grade students. I plan to use four classrooms, each containing approximately 20-22 students. By increasing the intervention time and number of students, I hope to maximize my findings. Finally, I use a control classroom for comparison purposes.

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Appendix C

TEACHER/TEACHING ASSISTANT CONSENT FORM

Project Title	***The effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of third-grade students.***
Why is this research being done?	*This is a research project being conducted by Lynn M. Newman (Dr. Marilyn Chambliss, principal investigator) at the University of Maryland, College Park. We are inviting you to participate in this research project because you willingly volunteered to be a research subject. The purpose of this research project is to investigate the effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of third-grade students. Information obtained from student work, observations, and audiotapes could make it easier for teachers to instruct third-grade readers on how to comprehend expository text.*
What will I be asked to do?	*Mrs. Newman will teach you how to teach your students to find the structure in an expository text, represent it graphically, and use the graphic to summarize the text. She plans to meet with you for five one-hour sessions. During these sessions, Mrs. Newman will model and use a thinking aloud process to demonstrate how to determine an expository text's structure (descriptive, sequential, or explanation) and how to complete a specific graphic organizer (topical net, matrix, or linear string) after reading an expository text. You understand that you will be responsible for delivery of similar instruction to your students during Guided Reading time. You will be discussing these topics with the students: text structure features for descriptive, sequential, and explanation texts, main idea and details, and how to use a topical net, matrix, or linear string graphic organizer to summarize the text. You also will be administering one pre-test and two post-tests to your students based on Mrs. Newman's plans. The instruction and testing will take seven six-day cycles. Each lesson will be 20 minutes in length. In addition, Mrs. Newman will be conducting one observation per Guided Reading group for two of the cycles during the study. These observations will not interrupt any class time for your students, and they will be audiotaped for later transcription. Mrs. Newman will not evaluate or grade any observations. You will be audio taping some of the lessons during each of the instructional cycles at Mrs. Newman's request. She will analyze the audiotapes for interaction between you and your students. She will not evaluate or grade any of the audiotapes.*

Project Title	*The effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of third-grade students.*
What about confidentiality?	*We will do our best to keep your personal information confidential. To help protect your confidentiality, Mrs. Newman will use a pseudonym for your name. Mrs. Newman will create pseudonyms for the school district and school and provide non-specific geographic information. Mrs. Newman will not share specific results with other teachers, principals, or members of the community. All data from the study will be stored in Mrs. Newman's home office in complete confidentiality. All data will be destroyed in five years. If we write a report or article about this research project your identity will be protected to the maximum extent possible. Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if they are required to do so by law.* *This research project involves making audiotapes of you. Mrs. Newman will transcribe the audiotapes to ensure proper delivery of the instruction and how the teachers and students interact. Mrs. Newman will be the only one to have access to the tapes, and she will store them in her home office. All tapes will be destroyed in five years.* *_____ I agree to be audiotaped during my participation in this study.* *_____ I do not agree to be audiotaped during my participation in this study.*
What are the risks of this research?	*You may feel apprehensive about being observed or audiotaped.*
What are the benefits of this research?	*The benefits to you include the opportunity to learn a new instructional strategy to use to teach children to comprehend expository text. In addition, the results may help the investigator learn more about reading instruction with expository text. In the future, other teachers and children could benefit from this study through improved development of expository text reading instruction.*
Do I have to be in this research? May I stop participating at any time?	*Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you would otherwise qualify.*

Project Title	***The effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of third-grade students.***
What if I have questions?	*This research is being conducted by Dr. Marilyn Chambliss, EDCI, at the University of Maryland, College Park. If you have any questions about the research study itself, please contact Dr. Marilyn Chambliss at: 2311E Benjamin Building, University of Maryland, College Park, MD 20742. (301) 405-7410 marilyn@umd.edu* *If you have questions about your rights as a research subject or wish to report a research-related injury, you can contact: Institutional Review Board Office, University of Maryland, College Park, Maryland, 20742;* *(e-mail)* irb@deans.umd.edu*; (telephone) 301-405-0678* *This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.*
Statement of Age of Subject and Consent	*Your signature indicates that:* *You are at least 18 years of age;* *the research has been explained to you;* *your questions have been fully answered; and* *you freely and voluntarily choose to participate* *in this research project.*
Signature and Date	*Name of Subject*	
	Signature of Subject	
	Date	

CONTROL TEACHER/TEACHING ASSISTANT CONSENT FORM

Project Title	*The effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of third-grade students.*
Why is this research being done?	*This is a research project being conducted by Lynn M. Newman (Dr. Marilyn Chambliss, principal investigator) at the University of Maryland, College Park. We are inviting you to participate in this research project because you willingly volunteered to be a research subject. The purpose of this research project is to investigate the effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of third-grade students. Information obtained from student work, observations, and audiotapes could make it easier for teachers to instruct third-grade readers on how to comprehend expository text.*
What will I be asked to do?	*The instruction and testing will take seven six-day cycles. Each lesson will be 20 minutes in length. You will be administering one pre-test and two post-tests to your students based on Mrs. Newman's plans. During the other cycles, you will be reading and discussing an expository text with your students, asking questions related to the material, choosing a reading activity of your choice, and generating a written response. In addition, you will be audio taping some of the lessons during each of the instructional cycles at Mrs. Newman's request. She will analyze the audiotapes for interaction between you and your students. She will not evaluate or grade any of the audiotapes.*

Project Title	*The effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of third-grade students.*
What about confidentiality?	*We will do our best to keep your personal information confidential. To help protect your confidentiality, Mrs. Newman will use a pseudonym for your name. Mrs. Newman will create pseudonyms for the school district and school and provide non-specific geographic information. Mrs. Newman will not share specific results with other teachers, principals, or members of the community. All data from the study will be stored in Mrs. Newman's home office in complete confidentiality. All data will be destroyed in five years. If we write a report or article about this research project your identity will be protected to the maximum extent possible. Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities if you or someone else is in danger or if they are required to do so by law.* *This research project involves making audiotapes of you. Mrs. Newman will transcribe the audiotapes to ensure proper delivery of the instruction and how the teachers and students interact. Mrs. Newman will be the only one to have access to the tapes, and she will store them in her home office. All tapes will be destroyed in five years.* *_____ I agree to be audiotaped during my participation in this study.* *_____ I do not agree to be audiotaped during my participation in this study.*
What are the risks of this research?	*You may feel apprehensive about being observed or audiotaped.*
What are the benefits of this research?	*The benefits to you include the opportunity to learn a new instructional strategy to use to teach children to comprehend expository text. In addition, the results may help the investigator learn more about reading instruction with expository text. In the future, other teachers and children could benefit from this study through improved development of expository text reading instruction.*
Do I have to be in this research? May I stop participating at any time?	*Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you would otherwise qualify.*

Page 3 of 3
Initials _____ Date _____

Project Title	**The effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of third-grade students.**
What if I have questions?	*This research is being conducted by Dr. Marilyn Chambliss, EDCI, at the University of Maryland, College Park. If you have any questions about the research study itself, please contact Dr. Marilyn Chambliss at: 2311E Benjamin Building, University of Maryland, College Park, MD 20742. (301) 405-7410 marilyn@umd.edu* *If you have questions about your rights as a research subject or wish to report a research-related injury, you can contact: Institutional Review Board Office, University of Maryland, College Park, Maryland, 20742;* *(e-mail)* irb@deans.umd.edu*; (telephone) 301-405-0678* *This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.*
Statement of Age of Subject and Consent	*Your signature indicates that:* *You are at least 18 years of age;* *the research has been explained to you;* *your questions have been fully answered; and* *you freely and voluntarily choose to participate in this research project.*
Signature and Date	*Name of Subject*	
	Signature of Subject	
	Date	

PARENTAL PERMISSION FORM

Project Title	*The effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of third-grade students.*
Why is this research being done?	*This is a research project being conducted by Lynn M. Newman (Dr. Marilyn Chambliss, principal investigator) at the University of Maryland, College Park. We are inviting your child to participate in this research project because your child is a third-grade student who reads non-fiction books during Guided Reading time. The purpose of this research project is to find out if a specific reading instruction helps third-graders understand non-fiction books. Information obtained from this research could make reading non-fiction books easier for third-graders.*
What will your child be asked to do?	*The procedure involves the classroom teacher and teaching assistant delivering instruction based on the ideas presented to them by Mrs. Newman. Your child will be given instruction on how to determine a book's structure and how to use a graphic organizer during reading of non-fiction books. In addition, your child will be asked to write a summary based on the book read during certain Guided Reading cycles. This instruction will take place during seven six-day Guided Reading cycles. Your child will receive 20 minutes of instruction each day. Mrs. Newman will collect the summaries and graphic organizers to analyze for ideas relevant to the book for the first, sixth, and seventh cycles. Also, Mrs. Newman will observe and audiotape your child during Guided Reading time. Mrs. Newman is interested in the instruction occurring at that time. Your child's name will not be included in any part of the study. Nothing that Mrs. Newman collects from your child will be included as part of your child's grades.*

Project Title	*The effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of third-grade students.*
What about confidentiality?	*We will do our best to keep your personal information confidential. To help protect your child's confidentiality, Mrs. Newman will create pseudonyms for the school district and the school and provide non-specific geographic information. Mrs. Newman will not share specific results with other teachers, principals, or members of the community. All data from the study will be stored in Mrs. Newman's home office in complete confidentiality. All data will be destroyed in five years. If we write a report or article about this research project, your child's identity will be protected to the maximum extent possible. Your child's information may be shared with representatives of the University of Maryland, College Park or governmental authorities if your child or someone else is in danger or if we are required to do so by law.* *This research project involves making audiotapes of your child. Mrs. Newman will review the tapes to analyze for teacher-student interaction during the instruction. Mrs. Newman will store the tapes in her home office and she will destroy them in five years.* *_____ I agree for my child to be audiotaped during his/her participation in this study.* *_____ I do not agree for my child to be audiotaped during his/her participation in this study.*
What are the risks of this research?	*There are no known risks associated with participating in this research project.*
What are the benefits of this research?	*This research is designed to improve how your child comprehends non-fiction books. In the future, other teachers and children could benefit from this study through improved development of nonfiction text reading instruction.*
Does your child have to be in this research? May your child stop participating at any time?	*Your child's participation in this research is completely voluntary. Participation is not a course requirement. Your child may choose not to take part at all. If your child decides to participate in this research, your child may stop participating at any time. If your child decides not to participate in this study or if your child stops participating at any time, your child will not be penalized or lose any benefits to which your child would otherwise qualify. Instead, your child will receive regular Guided Reading Instruction.*

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Project Title	***The effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of third-grade students.***
What if you have questions?	*This research is being conducted by Dr. Marilyn Chambliss, EDCI, at the University of Maryland, College Park. If you have any questions about the research study itself, please contact Dr. Marilyn Chambliss at: 2311E Benjamin Building, University of Maryland, College Park, MD 20742. (301) 405-7410 marilyn@umd.edu* *If you have questions about your child's rights as a research subject or wish to report a research-related injury, please contact:* **Institutional Review Board Office, University of Maryland, College Park, Maryland, 20742; (e-mail) irb@deans.umd.edu; (telephone) 301-405-0678** *This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.*
Statement of Age of Parent or Guardian and Consent	*Your signature indicates that:* * you are at least 18 years of age;,* * the research has been explained to you;* * your questions have been fully answered; and* * you freely and voluntarily choose to allow your child to participate in this research project.*
Signature and Date	*Name of Child* | *Name of Parent* | *Signature of Parent* | *Date* |

PARENTAL PERMISSION FORM

Project Title	*The effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of third-grade students.*
Why is this research being done?	*This is a research project being conducted by Lynn M. Newman (Dr. Marilyn Chambliss, principal investigator) at the University of Maryland, College Park. We are inviting your child to participate in this research project because your child is a third-grade student who reads non-fiction books during Guided Reading time. The purpose of this research project is to find out if a specific reading instruction helps third-graders understand non-fiction books. Information obtained from this research could make reading non-fiction books easier for third-graders.*
What will your child be asked to do?	*Your child will be asked to construct a graphic organizer and write a summary based on the book read during three Guided Reading cycles. Mrs. Newman will collect the summaries and graphic organizers to analyze for ideas relevant to the book that your child has read. Also, Mrs. Newman will observe and audiotape your child during Guided Reading time in a small group setting. Mrs. Newman is interested in the instruction occurring at that time. Your child's name will not be included in any part of the study. Nothing that Mrs. Newman collects from your child will be included as part of your child's grades.*

Project Title	*The effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of third-grade students.*
What about confidentiality?	*We will do our best to keep your personal information confidential. To help protect your child's confidentiality, Mrs. Newman will create pseudonyms for the school district and the school and provide non-specific geographic information. Mrs. Newman will not share specific results with other teachers, principals, or members of the community. All data from the study will be stored in Mrs. Newman's home office in complete confidentiality. All data will be destroyed in five years. If we write a report or article about this research project, your child's identity will be protected to the maximum extent possible. Your child's information may be shared with representatives of the University of Maryland, College Park or governmental authorities if your child or someone else is in danger or if we are required to do so by law.* *This research project involves making audiotapes of your child. Mrs. Newman will review the tapes to analyze for teacher-student interaction during the instruction. Mrs. Newman will store the tapes in her home office and she will destroy them in five years.* *_____ I agree for my child to be audiotaped during his/her participation in this study.* *_____ I do not agree for my child to be audiotaped during his/her participation in this study.*
What are the risks of this research?	*There are no known risks associated with participating in this research project.*
What are the benefits of this research?	*This research has not been designed to benefit your child specifically. We will compare the performance of the children in your child's class with the performance of other children in your child's school who have participated in four cycles of a new type of instruction. Nonetheless, your child will have practice creating graphic organizers and summarizing non-fiction books, two activities with strong research support for improving comprehension. In the future, other teachers and children could benefit from this study through improved development of nonfiction text reading instruction.*
Does your child have to be in this research? May your child stop participating at any time?	*Your child's participation in this research is completely voluntary. Participation is not a course requirement. Your child may choose not to take part at all. If your child decides to participate in this research, your child may stop participating at any time. If your child decides not to participate in this study or if your child stops participating at any time, your child will not be penalized or lose any benefits to which your child would otherwise qualify.*

Project Title	*The effects of explicit instruction of expository text structure incorporating graphic organizers on the comprehension of third-grade students.*
What if you have questions?	*This research is being conducted by Dr. Marilyn Chambliss, EDCI, at the University of Maryland, College Park. If you have any questions about the research study itself, please contact Dr. Marilyn Chambliss at: 2311E Benjamin Building, University of Maryland, College Park, MD 20742. (301) 405-7410 marilyn@umd.edu* *If you have questions about your child's rights as a research subject or wish to report a research-related injury, please contact:* **Institutional Review Board Office, University of Maryland, College Park, Maryland, 20742;** **(e-mail) irb@deans.umd.edu; (telephone) 301-405-0678** *This research has been reviewed according to the University of Maryland, College Park IRB procedures for research involving human subjects.*

Statement of Age of Parent or Guardian and Consent	*Your signature indicates that:*
	  you are at least 18 years of age;,
	   the research has been explained to you;
	   your questions have been fully answered; and
	  you freely and voluntarily choose to allow your child to
	  participate in this research project.

Signature and Date	*Name of Child*	
	Name of Parent	
	Signature of Parent	
	Date	

Assent Form

Project Title	Helping Third-Graders Understand Non-Fiction Books
Assent	Mrs. Newman would like to collect the important ideas you write down and your summaries from the non-fiction books read during Guided Reading time. Please print your name on the line below if you agree to be in Mrs. Newman's project.
Purpose	Mrs. Newman is trying to help you understand non-fiction books.
Procedures	Your classroom teacher or teaching assistant will show you how to write down the important ideas from a non-fiction book. Then, you will use those ideas to write a summary about the book. You will be reading seven different non-fiction books during Guided Reading time. Mrs. Newman will collect your important ideas that you write down and your summaries.
Confidentiality	Mrs. Newman will not use your name or your school's name in her project. Mrs. Newman will keep your answers in her home office and will destroy them within five years.
Risks	Mrs. Newman does not expect that the project will hurt you or embarrass you.
Benefits, Freedom to Withdraw, & Ability to Ask Questions	You are free to ask Mrs. Newman questions about her project. You can stop being in the project anytime you want. Your important ideas and summaries will not be graded.

Please print your name on the line below.

_____

Assent Form

Project Title	Helping Third-Graders Understand Non-Fiction Books
Assent	Mrs. Newman would like to collect the important ideas you write down and your summaries from the non-fiction books read during Guided Reading time. Please print your name on the line below if you agree to be in Mrs. Newman's project.
Purpose	Mrs. Newman is trying to help children understand non-fiction books.
Procedures	Your classroom teacher or teaching assistant will ask you to write down the important ideas from a non-fiction book. Then, you will use those ideas to write a summary about the book. You will do this three times. Mrs. Newman will collect your important ideas that you write down and your summaries.
Confidentiality	Mrs. Newman will not use your name or your school's name in her project. Mrs. Newman will keep your answers in her home office and will destroy them within five years.
Risks	Mrs. Newman does not expect that the project will hurt you or embarrass you.
Benefits, Freedom to Withdraw, & Ability to Ask Questions	You are free to ask Mrs. Newman questions about her project. You can stop being in the project anytime you want. Your important ideas and summaries will not be graded.

Please print your name on the line below.

_____

Appendix D

Observation Protocol

Time	Modeling and Think Alouds	Reference to Organizer

Appendix F

Intervention Teachers and Assistant Definition Handout

Definitions

Text structure. Text structure refers to the overall organization of ideas in a text (Meyer, 1985). Chambliss and Calfee (1998) noted that a small set of rhetorical patterns known by authors and readers have developed to organize the ideas in expository text.

Summary. A summary is a recall of text that identifies the important elements and the author's overall theme (Winograd, 1984). Brown, Palincsar, and Armbruster (1984) noted that the "ability to summarize information is important to understanding and remembering texts" (p. 968). For the purposes of this study, students will write a summary that tells what the text is about including the important information and details and how they are related.

Think alouds. Think aloud is a "metacognitive technique or strategy in which a teacher verbalizes thoughts aloud while reading a selection orally, thus modeling the process of comprehension" (Harris & Hodges, 1995, p. 256). This metacognitive technique involves overt, verbal expressions where a reader describes the process of constructing meaning from texts (Baumann, Jones, & Seifert-Kessell, 1993).

Text Structures

Descriptive rhetorical pattern. A descriptive text presents a reader with attributes about an object, like a picture that reveals one moment in time (Chambliss & Calfee, 1998).

Explanation rhetorical pattern. An explanation text presents a series of sub-explanations that are logically ordered to lead a reader from a naïve understanding to a more complex understanding. This type of text "fills the gap between a young reader's understanding of a phenomenon and the scientific explanation by presenting important information, metaphors, and analogies" (Chambliss & Calfee, 1998, p. 33).

Sequence rhetorical pattern. A sequence text presents ideas that show a progression of time (Chambliss & Calfee, 1998). A sequential text could describe a process or procedure using sequential steps.

Graphic Organizers

Graphic representations of text. Graphic representations of text are the diagrams used to depict the relationship between the ideas presented by the author (Chambliss & Calfee, 1998). These representations allow students the opportunity to follow the text design such as topical net (Chambliss & Calfee, 1998). Topical net, matrix, and linear string will be the graphic organizers utilized for this study.

Topical net graphic organizer. A topical net graphic organizer visually represents ideas presented within a descriptive expository text (Calfee & Chambliss, 1987). This type of organizer groups ideas into three to five subtopics based on their association with the overall topic (Chambliss & Calfee, 1998).

Matrix graphic organizer. A matrix organizer aids a reader in diagramming the central ideas in an expository text that compares or contrasts. In a matrix organizer, a reader organizes the ideas across two or more dimensions in which each subtopic deals with the same attributes (Chambliss & Calfee, 1998).

Linear string graphic organizer. A linear string graphic organizer is the most common representation for a sequential text. The linear string organizer helps a reader map out a series of events according to the passage of time (Chambliss & Calfee, 1998).

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