Effects of Explicit Instruction in Text Structure and the Use of Graphic Organizers in Students Reading Expository Text that have High Fluency Rates but Low Comprehension Rates

Emily Marie Bremmer

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The Effects of Explicit Instruction in Text Structure and the Use of Graphic Organizers in Students Reading Expository Text that have High Fluency Rates but Low Comprehension Rates

By

Emily Marie Schmidt Bremmer

A Graduate Field Experience

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4/28/12
(Date)
Dedication

This action research reflects the love, care, and support I received from my husband, Michael Paul Bremmer, and my baby son, James Michael Bremmer. Thank you.

I would like to extend my deepest gratitude to my entire family, especially my mother, father, and sister, for their encouragement throughout my studies at Cardinal Stritch University.

I would like to thank my first grade students, for their enthusiastic participation and love of reading, and St. Monica School, for allowing an action research project to take place.

It is with love and gratitude that my action research is dedicated to all of you.
THE EFFECTS OF EXPLICIT INSTRUCTION IN TEXT STRUCTURE AND THE USE OF GRAPHIC ORGANIZERS IN STUDENTS READING EXPOSITORY TEXT THAT HAVE HIGH FLUENCY RATES BUT LOW COMPREHENSION RATES

Emily Marie Schmidt Bremmer
Cardinal Stritch University

This study documents the effects of explicit instruction in text structure and the use of graphic organizers in students reading expository text that have high fluency but low comprehension rates. During the explicit instruction in the use of graphic organizers the teacher scaffolds the understanding of expository text, text structure, signal words, and graphic organizers (Hall, Sabey, & McClellan, 2005). Research indicates that explicit instruction in text structure and the use of graphic organizers when teaching expository text structures is a factor in increasing comprehension in students with low comprehension rates. An action research was designed for four students with high fluency but low comprehension rates. The students participated in an intervention containing an expository text experience including prompts to be aware of different types of text structure, signal words, and the use of graphic organizers for recall and the generation of written responses. The findings of the action research indicate that instruction in text structure and graphic organizers play an important role in the understanding of expository text in students with low comprehension rates.
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Chapter 1

Introduction

The purpose of this action research was to determine the effect of explicit instruction in the use of graphic organizers in students reading expository text that have high fluency rates but low comprehension rates. This study was chosen due to the researcher’s knowledge that student awareness of text structures must increase as students progressively shift from learning to read and reading narrative text, to reading for information through expository text. By the third and fourth grade, there is a noticeable shift to reading texts for information. This information is often dense and written in long passages (Gillet, Temple, & Crawford, 2004; RAND Reading Study Group, 2002). Students are then tested on this material, or are expected to recall, summarize, and generate written responses. Without the proper knowledge and tools to do so, even the most fluent readers may struggle. Research reveals that students’ reading comprehension skills improve when they acquire knowledge of texts’ structure development and use them properly. The researcher’s own belief that reading comprehension must be focused on learning strategies, which are adaptable, flexible, and, most important, in the reader’s control, led to this action research study.

Students 1, 2, 3, and 4 are four first grade students at a private suburban grade school in Whitefish Bay, Wisconsin. At the beginning of the study, student 1, one of the action research subjects, was 7 years 4 months. The participant’s classroom teacher states that she is hardworking student and an enthusiastic learner. Student 1 has a high word recognition level and is making progress with decoding multi-syllable words. While student 1 is a fluent reader with high word recognition skills, she struggles with summarizing, sequencing, and recall of what she previously read. Student 2, the second action research subject, was 6 years 6 months at the time
of the study. While the instructional reading level of student 2 is third grade, he struggles with oral and written comprehension test questions. His parents report that student 2 has a difficult time completing the required weekly book reports. He likes school, is eager to please, but shows frustration with these areas. The third action research subject, student 3, was 6 years 8 months at the time of the study. While the reading assessment of student 3 also showed that he is reading at an instructional level of third grade, student 3 scored lower than the other students in alphabetic knowledge and decoding skills. He missed three out of 26 letter sounds and nine out of 16 words on his decoding spelling inventory. He often skips or makes guesses when he reads multi-syllable words in an attempt to be a fast and fluent reader. Student 3 understands how to use look backs to find an answer on a test, but struggles with written responses. Student 4, the fourth action research subject, was 7 years 6 months at the time of the study. While the reading assessment of student 4 showed that her instructional reading level was at fourth grade, student 4 struggles with sequencing, identifying story structure, and remembering details. The students’ classroom teacher stated that all four students have high fluency, ranging from 80-100 wpm, but low comprehension rates. In October, assessment results placed all four students in the high reading group within their first grade classroom. The assessment showed that the first graders had high alphabetic knowledge, word recognition, decoding skills, and passage fluency scores. By December of that same year, the participants were able to successfully read the first 300 words from the Fry Word List with accuracy and automaticity. While each student was highly proficient with word recognition and sight word automaticity, they lacked knowledge in their ability to summarize, retell, and generate written responses to what they had read. The participants were placed in the high reading group based on their word recognition and sight word automaticity; however, their comprehension scores fell below the average of their peers in
the high reading group. This impacted the participant’s ability to effectively participate in classroom discussions and complete classroom work.

**Definition of Key Terms**

Comprehension is a strategic process. Researchers found that teaching the structure of informational texts improves both comprehension and recall of key text information (Block & Duffy, 2008). Text structure, or the organization of the text, refers to the arrangement of ideas and the relationship among the ideas (Ambruster, 2004). Graphic organizers, or visual text frames, are a tool used for organizing what the student is learning from reading. Graphic organizers help a student to understand and remember what they have read, so they are then able to summarize, retell, study for a test, or complete a written response successfully (Armbruster, 2004). Text features can help readers locate and organize information in the text. Headings, italicized vocabulary words, captions, maps, and charts are all examples of key text features which introduce students to specific pieces of information (Block & Duffy, 2008). The recognition and use of text structures are essential processes underlying comprehension and retention.

**Connection to Wisconsin Common Core Standards**

There are several Wisconsin Common Core State Standards, Reading Standards for Informational Text K-5, met throughout the intervention. The first standard addressed is standard five, which states that first grade students will know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text. The intervention provided a variety of opportunities for understanding text features including reading charts, identifying italicized vocabulary words, and locating headings. Prior to reading expository text, the researcher modeled how to identify and utilize text features.
The researcher then continued to model and scaffold students in the use of text features throughout the study and students were eventually given the responsibility of utilizing text features independently.

The next standard addressed is standard seven, which states that a first grade student will use the illustrations and details in a text to describe its key ideas. This standard encouraged the students to explain how specific images, such as a photograph or diagram, contribute to and clarify information in the text. As the expository passage was read and reread, the students were then able to add to their graphic organizers, ask questions, and draw conclusions.

The third standard addressed is standard nine, which states that first grade students will identify basic similarities in and differences between two texts on the same topic (i.e., in illustrations, descriptions, or procedures). During the text structure lesson on compare and contrast, students were taught how to identify similarities and differences, through the use of expository text, as well as through illustrations, captions, and descriptions about the non-fiction topic of study. Also learned through the compare and contrast text structure was how to identify the most important points presented by the two expository text pieces on the same topic.

The next standard addressed is standard ten, which states that with prompting and support, appropriately complex texts can be read by first grade students. The intervention included a wide selection of non-fiction topics gathered from an online encyclopedia, library books, social studies textbooks, and science textbooks. Within the wide selection of non-fiction topics, students were exposed to various text features and the five key text structures found in expository text. The intervention provided students with the appropriate scaffolding needed at the high end of the complexity range. Students received explicit teacher modeling, prompting, support, and appropriate scaffolding before, during, and after reading.
The participants in this study will benefit from explicitly taught comprehension interventions. The reading assessments showed that the first graders had high alphabetic knowledge, word recognition, decoding skills, and passage fluency scores. The participants were placed in the high reading group based on their word recognition and sight word automaticity; however, their comprehension scores fell below the average of their peers in the high reading group. They lacked knowledge in their ability to summarize, retell, and generate written responses about what they had read. The researcher in this study will use expository text to model and explicitly teach the use of text features and text structures to comprehend text. Through the use of graphic organizers, students will learn how to identify the main idea and important details, thus making it easier to recall what was read and generate a written response.

Chapter two will discuss the research and theoretical perspectives that support this action research.

Chapter 2

Introduction

This chapter will focus on research which supports an action research on the effects of explicit instruction in the use of graphic organizers and text structures in students reading expository text that have high fluency rates but low comprehension rates. The following chapter first describes the beliefs comprising the researcher’s theoretical perspective then explores the four areas of research foundational to this action research: explicit instruction of graphic organizers and expository text structures to students at the elementary level, explicit instruction of graphic organizers and expository text structures to students with low comprehension scores, the effect of discourse while reading expository text processes and
outcomes of thinking aloud in expository text, and the effect of discourse while reading expository text.

**Theoretical Perspectives**

The beliefs of the following researchers influenced the direction of this action research. The teacher must support and nurture individual student needs within a safe learning environment. The classroom teacher must be reactive to student needs and able to combine and adapt methods of instruction, teaching techniques, and materials appropriately. The classroom teacher must explicitly teach the reading process and scaffold the reading program effectively to ensure student success. The reading program must be supplemented and enriched with explicit language and teacher modeling so that students are able to construct knowledge, use oral language, and make connections and create meaning to text. Different instructional practices and assessments must be used when teaching literacy (Block & Duffy, 2008). Comprehension is an important component and it must be taught explicitly using different instructional practices and assessments. Theorists who support these perspectives of literacy instruction are Vygotsky and Block, Duffy, and Pressley.

Vygotsky's (1978) theory included components critical in instructing students with learning difficulties. Vygotsky's beliefs were that learning is social, it occurs in social contexts, learning is interceded by language, and learning takes place within the Zone of Proximal Development. Vygotsky believed that the instruction students receive should be slightly above their developmental level, The Zone of Proximal Development. The teacher must scaffold the process until the student can complete the task independently. The teacher must scaffold the instruction using explicit language in order to effectively teach students until they are able to complete the task independently (Block & Duffy, 2008).
Block and Duffy (2008) and Pressley (1992) had an interactive perspective to teaching and learning comprehension skills and strategies. Block, Duffy, and Pressley believed that readers must search for meaning while they read, use text clues and background knowledge to generate predictions, understand how to monitor those predictions, and successfully construct a representation of the author's meaning. Block and Duffy (2008) believed that in contrast to reading skills, comprehension strategies must be taught thoughtfully, since they change in relationship to the text, the readers' purpose, and the readers' background knowledge. Pressley (1992) found that teaching the structure of informational texts improves both comprehension and recall of key text information. Further, teaching students to use visual text frames as a tool for organizing what they are learning from reading helps them to understand and remember what they have read, and transfer effects to new passages without assistance (Pressley, 1992). Many factors contribute to the way students comprehend text, particularly expository text. The teacher, students, and text must work together to create meaning and understanding to ensure student success in this interactive model.

**Review of Literature**

Comprehension is not a single skill or strategy; rather, comprehension is a single word used to identify a set of sub-processes, skills, and strategies that the reader uses simultaneously to construct meaning from a text within a specific social context (Block & Duffy, 2008; Harvey & Goudvis, 2000). Elementary-level students who are not taught explicit comprehension strategies may experience challenges when entering the reading to learn phase of school. To be successful, elementary-level students must be taught explicit comprehension strategies in the areas of graphic organizers and text structures (Duke & Pearson, 2002).
**Expository Text at the Elementary Level**

Students experiencing challenges in comprehension may struggle to successfully read expository text as they enter the reading to learn phase of school. The researchers Williams, Nubla-Kung, Pollini, Stafford, Garcia, and Snyder (2007) evaluated the effectiveness of a comprehension program integrated with social studies instruction designed for at-risk second graders. The program included instruction in cause-effect text structure, emphasizing clue words, generic questions, graphic organizers, and the close analysis of specially constructed cause and effect target paragraphs. Research studies show that by the time students reach fourth grade, much of the content that they encounter in the classroom is presented in the form of expository text. Without students adequately understanding the text structures that are inherent in expository text and the strategies needed to comprehend the text that is organized within these structures, many students struggle (Block & Duffy, 2008). Therefore, the researchers wanted to test if it was beneficial to combine a comprehension lesson with a social studies program at the second grade level in order to begin to prepare younger elementary students to successfully read expository text. The researchers hypothesized that the group receiving instruction in cause and effect text structure would perform higher on the posttests than the content-only group and the no-instruction control group. The variables in this study include students’ background knowledge and interest in the expository material, which would affect their motivation and comprehension level (Williams et al., 2007).

The participants for this study included 243 second grade students. Fifteen of the students had Individualized Education Programs (IEP), and five students had been referred for IEPs. Fifteen classroom teachers from three different elementary schools in New York City volunteered to participate in the study. The three schools were similar in their demographics and
all three were categorized as Title I schools. The total enrollment across the schools included 76.5% Hispanic, 22% African American, 0.5% European American, and 1% Asian or other. Ninety-three percent of the students received state aid in the form of free or reduced lunch, and approximately 5% of the students were enrolled in either part-time or full-time special education services. The teachers were randomly assigned to one of three experimental conditions: either the text structure program, the content-only program, or the no-instruction control program (Williams et al., 2007).

The content goal of the instructional programs was to teach students about three historical communities in the United States. More specifically, students read about homes, schools, and jobs in these communities. Both programs used biographies, other trade books, and specially constructed cause and effect paragraphs. Selection of the books was based on appropriateness of content and quality of photographs. The readability of the paragraphs was between third and fourth grade, using the Dale-Chall Readability Scale (Chall & Dale, 1995). This was a rather high readability, because some of the words in the text were unfamiliar words on the Dale-Chall reading list (Williams et al., 2007).

The text-structure program contained three units. Each unit focused on one historical community, with 22 mini-lessons as part of each unit. An introductory lesson introduced the concept of cause and effect and also the content of the program through a narrative book, On the Town: A Community Adventure (Caseley, 2002). The first lesson on each feature included instruction on: the concept of cause and effect, cause and effect clue words, vocabulary, trade book read-aloud and discussion, vocabulary chart, cause and effect questions, and analysis of the paragraph. The second lesson on each feature included: the use of a graphic organizer, comprehension questions, and a lesson review (Williams et al., 2007).
The content-only program taught the same social studies content and used the same materials as the text structure program. However, it did not focus on cause-effect structure. Just as in the text-structure program, there were 22 lessons: one introductory lesson, three lessons introducing each historical community, and two lessons on each of the three features within each unit. The introductory lesson focused on the general content of the program through *On the Town: A Community Adventure* (Caseley, 2002). The first lesson on each feature included instruction on: KWL chart, vocabulary, trade book read-aloud and discussion, community chart, and graphic organizer. The second lesson on each feature included instruction on a read-aloud of the target paragraph, comprehension questions, a journal entry, and lesson review (Williams et al., 2007).

The teachers received training sessions to familiarize themselves with the program that they were going to teach. The pretest was then administered in two 30-45 minute sessions, and included the Word Identification and Passage Comprehension subtests of the Woodcock Reading Mastery Test-Revised, Form H (Woodcock, 1987). The second pretest session contained three strategy and two outcome measures. The strategy measures included locating clue words within a paragraph locating cause and effect clauses, and recalling the cause and effect questions. The outcome measures assessed knowledge of vocabulary concepts and ability to provide well-structured cause and effect statements. The posttest consisted of two 30-45 minute sessions each. During one session, students completed form G of the Word Identification and Passage Comprehension subtests of the WRMT-R (Woodcock, 1987). The other session included testing the following strategy measures: locating clue words, underlining clauses, completing the graphic organizer for one cause-effect paragraph, and recalling the cause-effect question. The content outcome measures assessed knowledge of explicit information about the features of what
was studied, knowledge of other content presented in the target paragraphs, and vocabulary definitions. The comprehension outcome measures required students to answer three types of questions, which included non-causal, cause, and effect questions, concerning a series of paragraphs that involved social studies content. Several of these measures required oral responses (Williams et al., 2007).

Scoring guidelines were developed for each measure on the basis of a small sample. Criteria for judging whether a response was correct, and how many points to give each response, were determined. Two scorers completed independent blind scoring of 25% of the protocols. Inter-rater reliability for scoring ranged from 95% to 100% across measures. After the posttest, meetings were held with each teacher who taught an instructional program to explain the purpose of the study more fully and to get feedback. Teachers in the no-instruction control group were also debriefed and were given the program materials for use with their classes.

On the first measure, Locating Clue Words, there was an overall effect of treatment. Specific comparisons indicated that the text structure group scored significantly higher than either the content-only or the no-instruction group. There was no difference between the content-only and the no-instruction groups. The next measure, Underlining Clauses, the text structure group scored higher than either the content-only group or the no-instruction group. On the Completing the Graphic Organizer measure, the effect of treatment was not significant. On the final strategy measure, Recalling Cause and Effect Questions, possible scores ranged from 0 to 2. The effect of the treatment was not significant. The pattern of results on the latter two measures, though not significant, was in line with the expectation that the text structure group would outperform the other two groups (Williams et al., 2007).
The content outcome measures assessed the content taught in both instructional programs. Similar results were found for all three content outcome measures. The first measure was Feature Questions. The text structure group scored significantly higher than the no-instruction group, and the content-only group also scored significantly higher than the no-instruction group. The next measure, the Non-Feature Questions, showed that the text structure-group and the content only-group scored significantly higher than the no-instruction group. There was no difference observed between the content-only groups. The final outcome measure was Vocabulary Definitions; there were eight items, and possible scores ranged from zero to eight. The text structure group and the content-only group scored significantly higher than the no-instruction group. There was no difference between the text structure and the content-only groups (Williams et al., 2007).

There were five comprehensions measures that involved paragraphs with social studies content. They required students to answer three types of questions: non-causal, cause, and effect questions. The first comprehension outcome measure assessed the effect of explicit teaching. The text structure group and the content-only group scored significantly higher than the no-instruction group. There was no difference between the text structure and the content-only groups. The next four measures required oral responses to non-causal, cause, and effect questions. The text structure group scored significantly higher than either the content-only or the no-instruction group. There was no difference between the content-only group and the no-instruction groups (Williams et al., 2007).

Overall, the program improved the comprehension of instructional cause and effect texts, and there were transfer effects on some comprehension measures. The performance of the two instructed groups did not differ on any of the content measures, indicating that such integrated
instruction can be accomplished without a loss in the amount of content acquired. The researchers found that this program represents the type of listening and reading instruction that can work at this grade level for all students, including those at risk for academic failure. The study supports the researchers’ previous findings on the effectiveness of explicit instruction at the primary-grade level. The researchers took their findings and revised the program, and began a replication of the study. In the new study, more time and attention was devoted to the concept of cause and effect using familiar content. Since research has shown that this is one of the most challenging text features, the researchers focused heavily on text analysis using independent sentences. The researchers also adjusted their program to teach only the one cause and one effect text structure pattern, rather than introducing one cause and multiple effects paragraphs. Clue words were added to the lessons gradually, and the graphic organizer and generic questions were simplified. Williams et al. (2007) show the importance of teaching comprehension instruction to younger elementary students, even if they have not yet mastered word recognition and are not fluent readers. Students at the elementary level need explicit instruction in expository text, and especially in the cause and effect text feature, which research shows is more challenging. There are many aspects of comprehension that need to be taught explicitly to early elementary-age students (Williams et al., 2007). While Williams et al. (2007) focused mainly on comprehension of second grade students using the Social Studies curriculum, Williams, Stafford, Lauer, Hall, and Pollini (2009) researched comprehension of second grade students using Science curriculum. The following study will demonstrate how text structure was taught to second grade students in the context of Science.

The researchers Williams, Stafford, Lauer, Hall, and Pollini (2009) designed a research study to evaluate the effectiveness of comprehension training within a program that taught
science content to second graders. The program included instruction about the structure of compare-contrast expository text, emphasizing clue words, generic questions, graphic organizers, and the close analysis of text structure. The findings of the evaluation showed that students at the elementary level did indeed benefit from explicit comprehension instruction in text structure. The researchers built upon the success of the science and comprehension training program by asking themselves additional questions and making changes to improve the effectiveness of it. The hypothesis of the study was that explicit instruction in the use of graphic organizers and text structure would greatly increase students’ comprehension of expository text (Williams et al., 2009).

The participants in the study consisted of 215 second-grade students from four different elementary schools, as well as 15 female classroom teachers. The students and teachers were randomly assigned to three experimental conditions. The program did not replace any of the science or literacy instruction of the school; rather, it simply acted as a supplement. Students were pretested individually in two sessions. Students were given the Word Identification and Passage Comprehension subtests of the Woodcock Reading Mastery Test, From H (Woodcock, 1998). Students were given a test to assess their ability to perform several of the tasks to be taught in the instructional program. The conditions were: the text structure program, a content program, or a no-instruction control program (Williams et al., 2009).

There were 12 lessons, taught in 22 sessions. The sessions were taught across a span of two months, and teachers taught three sessions per week. Lessons one and two focused on two familiar animals and contained information on the concept of genre. Both lessons introduced the difference between fact and fiction and the distinction between a compare and contrast paragraph and a descriptive paragraph. They also included an introduction to the purpose for reading
expository text, which is to learn new content. Lessons three through nine focused on the compare and contrast structure. Each lesson focused on two of the given target animals, which were the same animals studied in all of the lessons. Lessons 10 through 12 included mixed-structure paragraphs containing both compare-contrast and pro-con statements. This helped the transition from single structure text to a more authentic text, in that it provided an opportunity for students to read a text full of a variety of text features (Williams et al., 2009).

The lessons were set up in a very specific way. The text structure lesson had a very specific format for teachers to follow. At the beginning of each lesson, the teacher reviewed the purpose of the lesson and introduced six clue words to aid in the comprehension of material. During the next part of the lesson, teachers read about the two animals that were being studied in order to increase the interest of the students and to motivate them to read more. Teachers then introduced vocabulary concepts related to the animals. Students read the compare-contrast paragraph silently, and the teachers reread the paragraph while students followed along with their own copies. Students then analyzed the text with the specific goal of narrowing in on the similarities and differences found in the paragraph. Students circled compare clue words in green and the contrast clue words in blue. This helped students to begin to recognize relationships within the paragraph as highlighted by the clue words or signals throughout the text. Students used grids to organize the paragraph’s content. This grid was, essentially, a graphic organizer that corresponded to one of the four features used to classify animals. With the help of compare-contrast questions from their teacher, the students then organized and wrote sentences generated from their graphic organizers. The students used their graphic organizers to write summaries of the text. Students were given a paragraph frame to help them summarize.
The researchers found this approach to writing was very systematic and was helpful in teaching and modeling how to write a well-structured comparative statement (Williams et al., 2009).

The content lessons also had a very specific method. Each lesson contained nine sections, including a review. The teacher gave a brief introduction to the lesson, and then led a short discussion focused on information that the students already knew about the animals and other questions they might have. The teachers then read from trade books. They asked questions, led a discussion, and responded to students' questions. Students organized the content from the animal texts into information webs. Students were encouraged to include any information from the reading, discussion, or their previous knowledge. Students then were introduced to a list of vocabulary concepts, which were the same ones used in the text structure program. Teachers explained the concepts, discussed examples, and helped students to create sentences using the vocabulary words. Students then read a compare-contrast paragraph. The teacher allowed time for the students to read and reread the paragraph silently, and then the teacher reread the paragraph aloud to the class as they followed along. Students then looked back at their information webs and paragraphs and shared information they learned about the two target animals. The teacher encouraged students to generate sentences and to talk about what was read (Williams et al., 2009).

Williams et al. (2009) found that expository text structure can indeed be taught effectively to primary-grade level children. The knowledge that students gained improved their ability to comprehend novel text, whether the text was structured effectively or not. Even though students at the elementary level have not yet mastered word recognition and are not fluent readers, this study proves that they need not be deprived of basic instruction in comprehension. Not only are discussion questions, read-alouds, and think-alouds important for elementary
students, but this study also reveals the importance of explicit instruction in higher level comprehension strategies. This study shows the importance of explicit instruction in the use of graphic organizers and text features to students at the elementary level. The researchers found that listening and reading comprehension, combined with an integration of higher level comprehension instruction, is suitable at this grade level (Williams et al., 2009). This is discussed more in depth in the following study, which focuses on one specific expository structure, compare and contrast.

The researchers Williams, Hall, and Lauer (2004) studied and evaluated a new instructional program for second grade students that focused intensively on one specific expository structure, compare and contrast. The researchers were attempting to determine if the instructional program would increase comprehension in expository text that focused specifically on the compare and contrast structure. The variables in this study included the years of experience of the teachers, as well as the background knowledge, motivation, and interest of the students.

Participants of the study were second grade students at risk for academic failure. Almost 90% of the students qualified for free or reduced-rate lunch and 99% of them were minority students (Williams et al., 2004). Reading ability of the students was determined on the basis of Woodcock Reading Mastery Passage Comprehension (Woodcock, 1998).

Williams et al. (2004) conducted a study showing that children are sensitive to text structure, even though text structure is not typically taught until students are at or above the fourth grade level. The researchers conducted a study (Lauer, 2002) in New York City public schools in which they worked with one type of expository text, a problem-solution text. The researchers sought to determine whether second graders were sensitive to text structure
variations in the same way that older students were. The researchers also looked at content familiarity, and chose to focus on more general knowledge as opposed to a topic of which the students were not familiar. The researchers developed texts that had to do with actions and events that would likely occur in children’s everyday lives, and they also wrote texts that depicted actions and events that did not occur in their everyday lives. The researchers then compared the two sets of texts, and also added another variable. The researchers were interested in whether the effects of text structure and content familiarity differed for students who were proficient in comprehension ability and those who were not (Williams et al. 2004).

The researchers felt these studies were important because most of the reading children do in school is expository text. Students first read the text and were then questioned and asked four structure questions related to the important information in the text. All three variables, text structure, content familiarity, and reading comprehension ability, affected performance. Text structure helped students on a wider range of tasks than did content familiarity. Text structure helped students summarize and select important information to be included in their summaries. Researchers found significant differences between texts structured in a history textbook sequence and texts structured in a narrative sequence. This shows that young readers are sensitive to expository text structure (Williams et al., 2004).

Williams et al. (2004) took their findings and developed a program for children who were at risk for academic failure, and who would benefit from intensive and systematic instruction. The main purpose of the study was to determine whether instruction focused on text structure helped second-grade students improve their comprehension of compare and contrast expository text.
The text structure program that the researchers developed was based on compare and contrast. The researchers used an explicit and structured instructional model that included explanation and modeling by the teacher, followed by guided and then independent practice. The instruction focused on three strategies where students were taught how to use clue words to identify a text as compare and contrast, taught how to use a graphic organizer to lay out the relevant information in the text, and taught a series of questions that would help them focus on the important information in the text (Williams et al., 2004).

The participants in the study included a total of 128 students. Across three schools, the study included 56% Hispanic, 41% African American, 2% Caucasian, and 1% Asian. Almost 90% of the children received state aid in the form of free or reduced-rate lunch. Approximately 6% of the students were enrolled in special education services. Teachers of 10 second grade classes in three New York City public schools volunteered to participate in the program. All but one of the teachers had master’s degrees.

The materials that were used included a comprehensive animal encyclopedia and a trade book about animals. Short target paragraphs were prepared for students to read and analyze. The paragraphs included comparative statements about animals. As the program proceeded, these paragraphs became longer. Toward the end of the program, the paragraphs also included distracting information. The program consisted of nine lessons, which were taught in 15 sessions. Each lesson focused on two of the five animals and contained the following sections: clue words, trade book reading and discussion, vocabulary development, reading and analysis of target paragraph, graphic organizer, compare and contrast strategy questions, a summary with a paragraph frame, and lesson review. The first lesson focused on two familiar animals in order to
help students practice the procedure without being distracted by new content (Williams et al., 2004).

The classrooms were randomly assigned to one of the three treatments: text structure, content, and no instruction. The materials for this program were the same as those used in the text structure program. There were 15 sessions, which was the same as in the other program. Each lesson consisted of the following: background knowledge, trade book reading and discussion, a graphic organizer, vocabulary development, reading of the target paragraph, general content discussion, summary, and lesson review (Williams et al., 2004).

Following the lessons, students were interviewed individually, both orally and in writing. The researchers wanted to determine if the students had learned the three strategies that were taught. Several measures evaluated the strategies taught. The recall of clue words was assessed, as well as the ability to identify them in a paragraph, the ability to generate sentences, and recall of the compare and contrast questions. On the first of these measures, the students who received the text structure instruction did better than the students in the other two groups. On the fourth measure, recall of the three compare and contrast questions, there was no effect of treatment. The comparison content program included one strategy, a graphic organizer. There were no differences among the three treatment groups in their proficiency in this strategy. All groups achieved relatively high scores, indicating second graders' familiarity with the web strategy (Williams et al., 2004).

Williams et al. (2004) wanted to find out what students learned about text structure. They researched students' ability to summarize a compare and contrast paragraph containing material explicitly taught. The researchers counted the number of summary statements that were accurate and included an appropriate clue word. The text structure group performed better than
did the other two groups. The researchers investigated the students' ability to transfer, since the goal of reading comprehension instruction is to have students improve in their ability to read novel content, not to simply reread material. The researchers developed a series of three compare and contrast texts that were structured the same way as those used in the lessons. Across the three paragraphs, the text structure group scored significantly higher than either of the other two groups not only on the instructed paragraph but also on the transfer paragraph. These findings indicated that the text structure students had in fact transferred what they had learned. The text structure group attained a higher score on the vocabulary measure than did the content group. In turn, the content group did better than the no-treatment control group.

Overall, the study demonstrated that text structure instruction helped students improve their comprehension of compare and contrast expository text. Further, text structure instruction helped students improve without detracting from the ability to learn new content. In this study, posttest scores indicate that there was still a lot of room for growth. Students may have benefited from more instruction than was provided, though the researchers stated that the study gave them an excess of what was usually received in the typical classroom. The researchers suggest that future researchers could pursue the question of whether young children should be given intensive instruction specifically in each of the several expository text structures, including the more challenging compare and contrast structure (Williams et al., 2004). The following study continues to emphasize the importance of comprehending compare and contrast expository text structures, as it is crucial that students be provided with instruction that will prepare them for whatever type of text they may encounter.

The researchers Williams, Hall, Lauer, Stafford, DeSisto and deCani (2005) investigated the effectiveness of an instructional program designed to teach second graders how to
comprehend compare and contrast expository text. Along with introducing new content, the program emphasizes text structure via clue words, a sequence of questions, and a graphic organizer. The program was compared to a more traditional instruction that focused only on the new content, and also with a non instruction control group.

Three elementary schools participated in the study, and all were similar in terms of demographics. The participants in the study consisted of 128 second grade children total. Total enrollment across the three schools included 57% Hispanic, 41% African American, 1% Caucasian, and 1% Asian/Other. Eighty-eight percent of the students received state aid in the form of free or reduced-rate lunch, and 6% of the students were enrolled in either part-time or full-time special education services. Ten second grade teachers volunteered to participate. Their classrooms were randomly assigned to a condition of either text structure, content only, or no instruction. The number of years of teaching experience ranged from two to seven, and nine teachers had master’s degrees. Teachers were provided with all of the necessary materials to carry out the lessons and were allowed to keep the materials from the study. Both instructional programs used a comprehensive animal encyclopedia, trade books, and carefully constructed compare and contrast paragraphs (Williams et al., 2005).

For the pretest, students were tested individually in two sessions of about 30-45 minutes each. In the first pretest session, students were given the Word Identification and Passage Comprehension subtests of the Woodcock Reading Mastery Test (WRMT), Form H (Woodcock, 1998) and the Listening Comprehension subtest of the Wechsler Individual Achievement Test (Wechsler, 1992).

Selection criteria of the text for the program included an amount of information similar to the program content, text at a level of complexity suitable for the students and for teacher read-
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alouds, and quality of photographs. These books were used to provide exposure to expository
text and to heighten student interest. Each lesson targeted a few pages of the books from which
the teacher would read. The text structure program was taught in 15 sessions, consisting of two
sessions per week. It consisted of a series of nine lessons. The first lesson focused on two
familiar animals in order to familiarize students with the procedure without their being distracted
by new content. Each of the remaining lessons focused on two of the five target animals.
Teachers followed a lesson structure of introducing clue words, trade book reading and
discussion, vocabulary development, reading and analysis of the target paragraph, and organizing
the paragraph’s content using a matrix. A matrix is a graphic organizer that best depicts the
compare and contrast structure. The teacher then introduced compare and contrast questions to
help students organize the statements that they had generated from the matrices. Students then
used a t-chart to write summarizes of the text. Students were provided with a paragraph frame
since summarization skills were so complex. At the end of each lesson, the teacher and students
reviewed the clue words, vocabulary, and strategies (Williams et al., 2005).

The students in the content program received the same books and paragraphs as the
students in the text structure program, but the emphasis of the instruction in this group was on
content. This means that students focused on the general information and interesting facts about
the animals, rather than on the structure of the text. There were fifteen 45 minute sessions, just
like the text structure program. The content program corresponded with more traditional content
area instruction. Teachers followed a lesson of activating background knowledge, reading from
an encyclopedia or trade book, discussing what was read through teacher-led questions,
organizing the content from the text using an information web, working on vocabulary
development, reading the target paragraph, and sharing information and discussing the general
content. Students then looked back at their information webs and paragraphs and shared information they had learned. Students reviewed vocabulary concepts and the specific details and information they learned about each animal (Williams et al., 2005).

The posttest was conducted with each individual student in two sessions that lasted from 30 to 45 minutes. For the posttest, there were seven main outcome measures. The first three were strategy measures, which included locating clue words, utilizing a graphic organizer, and recall of compare and contrast questions. On the locating clue words measure, the text structure group scored significantly higher than the content and the no instruction group. On the graphic organizer measure, the text structure group scored significantly higher than the content and the no instruction group. For the recall of compare and contrast questions, there was no effect of treatment. Following the strategy measures, there were structure outcome measures which required students to provide paragraph summaries. The first was a measure of explicit teaching, which assessed the written summaries of students. There was no significant main effect for treatment, although there did appear to be a tendency for higher performance in the text structure group. The next three measures involved oral responses, and assessed whether students could summarize a paragraph that involved content that had never been read or discussed before. The final measure asked for an oral summary of a pro and con paragraph with content related to animals. This evaluated the students’ ability to transfer to an untaught text structure. The findings on these measures found that there was a significant difference between the text structure group and the content group, and a tendency for the text structure group to outperform the no-treatment group (Williams et al., 2005).

According to Williams et al. (2005), many researchers believe that comprehension instruction should begin in kindergarten and continue through the grades, though this belief is
founded on intuition and not on a strong research base. Research on text structure in the primary grades is limited, and the issue of the direct teaching of text structure and other aspects of reading comprehension remain unresolved. This study addressed the issue of what can be done to assist young children so that when they get to the intermediate grades, they will have the knowledge, skills, and strategies to successfully read and comprehend expository text. The study was designed to determine whether one common type of expository text could be taught to primary grade children without the loss of content knowledge about the actual text itself. The researchers found that students who received intervention with the Text Structure program not only learned what they were taught but were also able to demonstrate transfer of what they had learned to content beyond that used in instruction. The findings on the three oral measures that made successively greater transfer demands indicated that the text structure group was superior to the other groups on content that was closely aligned to the instructional materials and also on unrelated content. This finding suggests that the researchers were not merely teaching them the content of the instructional program but also how to process a particular type of expository text (Williams et al., 2005). Comprehension is developmental and different types of instruction are appropriate at different age levels. Instruction during the primary grades should be devoted to listening comprehension, specifically, to read-alouds in which the teacher provides cues and explanations in a less systematic, more informal manner than with the explicit instruction required when teaching text structure (Block & Duffy, 2008). Much more research is needed on this issue, but the present results indicate that explicit instruction might be a feasible and effective option at the second grade level for teaching at least some aspects of expository text comprehension (Block & Duffy, 2008).
Elementary age students with low comprehension rates often struggle as they enter the reading to learn phase of their schooling. By third grade, and then by the fourth, there is a noticeable shift to reading texts for information, information that is often dense and written in long passages. Explicit instruction in the use of graphic organizers and text structure when reading expository text has proven to be successful with elementary-age children. Armbruster (2004) established that explicit comprehension instruction in specific strategies and text structures in the elementary school years plays an important role in students’ future reading comprehension. Teaching comprehension strategies and text structures to students in primary grades can result in increased ability (Armbruster, 2004). Researchers also noted that students who understand the idea of text structure and how to analyze it are likely to learn more than students who lack this understanding. Readers of all ages and ability levels must be aware of text structures if they are to be successful. Readers who are unaware of the text structures are at a disadvantage because they do not approach reading with any type of reading plan (Armbruster, 2004). Researchers state that just as elementary students benefit from being explicitly taught text structures for expository text, middle school students with learning disabilities may benefit from being taught text structure for expository text in an effective and explicit manner (Armbruster, 2004).

**Expository Text at the Middle School Level**

The majority of reading in middle and high school consists of expository text structures. Over the past 60 years, reading comprehension in schools has changed its emphasis from the mastery of skills learned by rote memorization to a focus on learning specific strategies and text structure as a way to more fully understand what is being read (Block & Duffy, 2008). In order to be successful readers of expository text, middle school students must be taught explicitly and
strategically. The researchers Kim, Vaughn, Wanzek, and Wei (2004) sought to determine the effects of graphic organizers on the reading comprehension of students with learning disabilities. The researchers reviewed the findings of group design intervention studies examining the effect of graphic organizers on comprehension for students with LD. Their purpose was intended to help future researchers to more effectively understand how graphic organizers are used to improve reading comprehension of students with LD. The problem in their study was the effect of graphic organizers on the reading comprehension of students with LD. The researchers hypothesized that students who used graphic organizers would have higher reading comprehension scores than students who did not.

The independent variable was the use of graphic organizers; for example, semantic feature analysis, semantic maps, or other visual organizers that either displayed concept relationships discussed within the text or provided an outline or overview of the text. The dependent variable was the assessment of students' silent or oral reading and their ability to answer questions about the passage, as well as their previous knowledge about the passage.

Kim et al., (2004) chose studies where participating students were in grades K-12, participants had an identified disability, and research design was either a treatment-comparison design or a single-group design. The 21 studies included a total of 848 students with LD. Sixteen students with educable mental retardation were included in two of the studies. Four studies also included students without disabilities. Of the 21 studies, six included high school students, another six included junior high school students, and five included elementary school students. All of the studies used group designs, with either a treatment-comparison design, or a single group with multiple treatments design.
All of the studies used graphic organizers in their interventions, though researchers chose a variety of organizers. For example, semantic organizers, cognitive maps with a mnemonic, as well as cognitive maps without a mnemonic, and framed outlines were used. In 19 of the studies, the interventions lasted between one and three weeks, resulting in a range of two to 12 sessions. The interventions in the other two studies lasted 12 to 16 weeks with an unreported total number of sessions (Kim et al., 2004).

In each study, teachers, researchers, or both teachers and researchers administered the interventions. In 16 of the studies, graphic organizers were generated prior to instruction, and used throughout, or were generated prior to instruction but left incomplete for the teacher or researcher to complete with students during instruction. In the other four studies, the students themselves generated one of two different types of graphic organizers. Students either independently generated one on their own, or they were given a blank graphic organizer designed by the teacher and told to complete independently. One final study included both teacher-generated and student-generated graphic organizers and compared their effects.

In 19 of the studies, the interventions lasted between one and three weeks, resulting in a range of two to 12 sessions. The interventions in the other two studies lasted between two to 12 weeks with an unreported total number of sessions.

Overall, the findings of the researchers Kim et al. (2004) support the use of semantic organizers, cognitive maps with and without mnemonics, and framed outlines to promote these students' reading comprehension. Across the board, when the students were taught to use graphic organizers, large effect sizes were demonstrated on researcher-developed reading comprehension post-tests. The studies involving the use of semantic organizers showed an increase in reading comprehension scores on researcher-developed comprehension measures.
The three studies that investigated the effects of using cognitive maps with mnemonics on students’ reading comprehension revealed that students who used the cognitive maps with mnemonics outperformed those using conventional reading techniques. The seven studies that examined the effects of cognitive maps without a mnemonic on students’ reading comprehension showed higher comprehension scores than comparison conditions. Four single-group design studies also demonstrated the positive effects of using cognitive maps on students’ reading comprehension. Two studies that examined the effects of using framed outlines on the reading comprehension of students with LD found that students using framed outlines significantly outperformed those in comparison conditions, or who were reading basal textbooks. Although the researchers did not state which graphic organizer yielded better results than the others, they did state that the interventions under the teacher’s direction resulted in higher effect sizes than the studies under a researcher’s direction. Not only is the visual display of information such as those provided by graphic organizers important in the enhancement of reading comprehension in students with LD, but so is the explicit modeling and instruction provided by the teacher. The researchers found that the graphic organizers helped students organize the verbal information and thereby improved their recall of it. The following study continues to evaluate the effectiveness of utilizing graphic organizers with middle school students with learning disabilities.

The researchers DiCecoo and Gleason (2002) sought to address some of the concerns with research about graphic organizers by examining the effects of using graphic organizers with middle school students having learning disabilities. According to the researchers, students with LD, and all students who struggle to make connections and understand relationships, need instruction that explicitly demonstrates the connectedness of domain knowledge. The problem in this study was how graphic organizers cue relational knowledge with middle school students.
who have LD. The researchers hypothesized that graphic organizers would support students with LD to gain relational knowledge from expository textbooks. The variables in this study include background knowledge, motivation, interest, and student absences.

The participants in the study were 24 students with LD enrolled in two middle schools in a moderately sized city in Oregon. One school was located in a low socioeconomic status area, and the other was in a middle socioeconomic status area. The participants were chosen from three pullout resource room programs for students with mild disabilities. Participants were part of special education programs, had an Individualized Education Plan, and had parent permission, or gave their own permission, to be part of the study. Participants were assigned randomly to two groups, which resulted in six instructional groups. Three groups were assigned to the graphic organizer condition and three were assigned to no graphic organizer condition. To assess the groups, four measures were used. The word identification and word attack subtests of the Woodcock Reading Mastery Test-Revised, Form H (Woodcock, 1987) were administered to determine word reading skills and to ascertain the comparability of the two groups. A 20-item multiple choice pre-test was administered to determine the participants' knowledge regarding what kind of content could be covered in the instructional portion of the study. A pretest writing sample was used to assess the participants' general writing abilities and specific relational knowledge prior to instruction and to determine group comparability. The two groups were not significantly different on scores from the four pretest measures. This established an equivalence before the study began. To control for experimental mortality, and to ensure continuity of instruction, make up lessons were given to students who missed lessons due to absences from school. The researchers used a longer intervention period and used written essays to assess the students' ability to retain knowledge. Interestingly, efforts were made to align the content of the
text, the wording in the teacher scripts, and the content in the graphic organizers (DiCecco & Gleason, 2002).

Participants received instruction for a period of four weeks and the sessions were conducted during regular reading periods in the special education resources rooms of the two schools. Neither the setting nor the schedule affected or favored either condition. The six instructors who were involved in the study had extensive training in order to control for teacher effects. The instructors rotated five times during the 20 days. The researchers gathered their information and reading material from two chapters in the students’ social studies text books. The two chapters were divided into segments, or units of thought, which would lend themselves well to the use of graphic organizers. The graphic organizers were developed for each unit of thought and designed to make relationships more explicit and to cue relational knowledge. A total of five graphic organizers were introduced. They were all different configurations, but none of the configurations consisted of more than 16 cells, so that they were not overly detailed or complicated. Students were then taught through a model, prompt, and check lesson design. Students in the no graphic organizer condition received instruction identical to that of students in the graphic organizer condition, except that graphic organizers were not used (DiCecoo & Gleason, 2002).

The purpose of the study was to investigate whether higher student performance on domain knowledge measures would result from explicit instruction with graphic organizers. The results of the study support four conclusions regarding the use of graphic organizers to teach relational knowledge to students with LD. The first conclusion was that the results support the use of graphic organizers to aid students with LD in their recall of relational knowledge. The results show that students with LD benefited from a longer treatment time, and the measures
used to assess the effects of graphic organizers made a difference in the evaluations of the outcomes. When general knowledge was measured with multiple choice tests and quizzes, no difference was found between the two condition groups. However, when both groups were tested via essay, the two groups responded differently. The essays revealed that the students who were taught with graphic organizers were able to retrieve information successfully. Students with LD responded to a treatment that was more intensive and aligned than other studies done on this same subject matter. Overall, the results lend support for using graphic organizers with students with LD to gain relational knowledge from expository textbooks (DiCecco & Gleason, 2002).

The conclusions of this study must be carried out thoughtfully and with caution. Simply showing students a graphic organizer without the appropriate teacher modeling, guided practice, and review, is not likely going to achieve the same results as this study. This study shows how graphic organizers are effective when utilized within the context of intensive instruction. Instruction in summary writing or fact writing might also be necessary to ensure effectiveness of graphic organizer use. Teaching summary writing is an important piece for future educators to consider. Perhaps the use of graphic organizers in conjunction with explicit instruction in summary writing led to the increased recall that was shown in the essays in this study. Since it is evident that the students in this study benefited from the combination of graphic organizers, intensive instruction, and summary writing, then future researchers and educators must take all of these elements into consideration, as well as other important elements, when teaching expository text (DiCecco & Gleason, 2002). Another important element that researchers and educators must consider evaluating is fluency. The researchers in the following study included fluency as an outcome due to its documented correlation to reading comprehension.
The researchers Saenz and Fuchs (2002) identified the skill areas in which secondary students with learning disabilities exhibit different reading performance, especially when comparing narrative and expository text. To accomplish this goal, the researchers investigated whether secondary students with LD exhibit differential performance on reading fluency as a function of text type. If so, then this would mean that they would show differences in reading narrative versus expository. The researchers also investigated whether secondary students with LD exhibit differential performance on reading comprehension as a function of text type and question type.

The researchers compared two text types, narrative and expository. They decided to include fluency as an outcome in this study because of its documented correlation to reading comprehension. It has been established that poor reading fluency can be associated with poor reading comprehension. Fluent readers have a large sight word vocabulary and strategies for analyzing unfamiliar words, and they have an understanding of the purpose of reading (Caldwell & Leslie, 2005). Block & Duffy (2008) found that automaticity explains why fluent readers are able to decode and understand text easily, while beginning readers have difficulty.

The researchers sought to solve the problem of whether differences in reading fluency between narrative and expository text might contribute to differences in reading comprehension. Saenz and Fuchs (2002) hypothesized that reading comprehension of expository text would be lower in students, due to the fact that there is a great amount of research and evidence that shows how expository reading poses a greater challenge than narrative reading. The variables included students’ prior knowledge, motivation, and interest.

The subjects in this study were students from six high schools in 20 remedial and special education reading classrooms located in a southeastern U.S. urban school district. Students in
the remedial and special education reading classes were students who had not passed the minimum standards of the statewide minimum competency exam in the area of reading. Students in the remedial reading classes spent the majority of their instructional day in mainstream classrooms, whereas students in special education classes spent the majority of their instructional day in resource settings. To be able to participate in the study, the students had to be identified LD, which was determined by state and federal criteria. Students also had to have an estimated reading level between grades two and six, as determined by the teacher. Teachers judged reading level based on the most recent statewide testing, classroom observations, and the HSPALS and PALS reading assessments. (Saenz & Fuchs, 2002).

Four narrative passages and four expository passages were used to assess reading performance. Every student read aloud two passages of each type in one testing session, with the order of text type (narrative or expository) counterbalanced across students. Therefore, some students read two narrative passages followed by two expository passages, while others read two expository passages followed by two narrative passages. Random assignment was used to determine the order in which students read passages. Trained examiners administered the passages to students individually. These administrators collected four scores for each student. The scores were: words read correctly in two minutes, total questions answered correctly, literal questions answered correctly, and inferential questions answered correctly (Saenz & Fuchs, 2002).

To collect scores for words read correctly, examiners marked insertions, omissions, substitutions, hesitations longer than five seconds, and mispronunciations not caused by speech-related problems. The scores gathered were average number of words read correctly in two minutes for narrative passages and average number of words read correctly in two minutes for
expository. To collect scores for questions correct, students responded aloud to ten comprehension questions read to them by the examiner, who recorded their responses. When answering the ten comprehension questions, students were not allowed to reread the passage or look back at the passage tested. Of the ten comprehension questions, eight were literal and two were inferential. For each passage, student performance was scored as the number of literal questions answered correctly and the number of inferential questions answered correctly (Saenz & Fuchs, 2002).

To gather results from this study, one, one-way within-subjects ANOVA was conducted. This determined whether students exhibited differential performance as a function of text type on number of words read correctly in two minutes. The within-subjects factor for this analysis was text type, or narrative versus expository. Results of this analysis indicated that students read a greater number of words correctly on narrative rather than expository passages. Means for words correct in two minutes on narrative and expository passages, respectively, were 223.16 (SD = 70.75) and 212.62 (SD = 67.48). The ranges for narrative and expository passages, respectively, were 209.85 to 236.40 and 199.30 to 225.04. These results suggest that secondary students with LD read expository text less fluently than they read narrative passages (Saenz & Fuchs, 2002).

To determine whether students exhibited differential performance as a function of text type and question type on questions answered correctly, one, two-way within subjects ANOVA were conducted. The within-subjects factors for this analysis were text type and question type. Results of this analysis indicated a significant effect for text type and question type. Results also revealed a significant effect for text type by question type (Saenz & Fuchs, 2002).
Findings indicated that secondary students with LD, who have reading instructional levels between grades two and six, have more difficulty with expository than narrative reading. Findings revealed that secondary students with LD not only read expository text less fluently, but also had lower comprehension scores. Overall, this study shows the importance for future research that would examine mediating variables associated with students or texts that may contribute to students’ performance in reading expository text. For example, background knowledge, motivation, and interest are all factors for educators and future researchers to take into consideration. This study also shows the importance of instruction with expository reading materials, inferential skills, vocabulary, and reading fluency. Since success in school and adulthood depends on the ability to comprehend written expository information, then all students must be taught strategies to improve their expository reading skills. The researchers state that students must be explicitly taught how to identify the main idea and how to identify text structure. For identifying the main ideas, it is recommended that students be taught how and where to find topic sentences, how to use headings and subheadings, and how to distinguish main ideas from supporting details. Further, the researchers state that when teaching text structure, just about any instructional approach has received support, but more credence has been given to visual representations. The graphic organizer serves as tool for teachers to guide students through a discussion before or after reading. As students gain in their understanding of how to use a graphic organizer, they can move toward using and creating one independently. This leads students to becoming successful students and eventually, successful adults (Saenz & Fuchs, 2002). The following study elaborates further upon the effectiveness of the use of different graphic organizers, particularly on whether the presentation type of the graphic organizer affects students’ comprehension of text.
The researcher Ozmen (2011) compared the effectiveness of different presentations of graphic organizers on recalling information from compare and contrast text, a kind of expository text, in intellectually disabled students. The researcher wanted to discover whether the presentation type of the graphic organizer effects students' comprehension and retention of text. Ozmen hypothesized that the group where the graphic organizers for compare and contrast text were presented before the reading would have a greater effect on information recall.

The dependent variable of the study was the rate of recalling similarities and differences of the comparison concept depicted in the compare/contrast test. The independent variables of the study were the presentation of a researcher-constructed graphic organizer before reading and filling in researcher-constructed graphic organizers after reading (Ozmen, 2011).

Participants of the study were chosen from a special education classroom for students with mild intellectual disabilities in Ankara, Turkey. There were five male students who met the criteria of being able to read without syllabicate, attended a sixth, seventh, or eighth grade class, and were able to recall a maximum of one similarity and difference after reading a compare or contrast text. There were five students who met the study criteria. With the objective of determining the reading performance of the participating students, stories were chosen from a Turkish textbook at the students’ class level (Ozmen, 2011).

Different presentations of graphic organizers were used. The first presentation was with a teacher/researcher-constructed graphic organizer, which summarized the information depicted in an expository text before the text was read. The second presentation was a teacher/researcher-constructed graphic organizer provided for students to fill in after reading (Ozmen, 2011).

A total of 13 compare and contrast texts, written by the researcher, were used in this study. Three texts were used in the baseline, five were used during the presentation of the
graphic organizer before reading, and five of them were used during the presentation of the graphic organizer after reading. The researcher then tested the level of background knowledge of the students in regard to the selected topics through multiple-choice questions. The objective was to find out how much prior knowledge each student brought to the reading of the text. For each student, procedures were implemented for five school days, with two sessions per day. There was a half hour break between the two sessions. Baseline sessions lasted eight to 14 minutes for each student using a graphic organizer before reading with a post-assessment that lasted 15 to 21 minutes, or 31 to 36 minutes for students using a graphic organizer after reading (Ozmen, 2011).

In order to collect the final posttest data, two questions were asked of each participating student. The students were asked what the concept similarities were, and what the concept differences were. The researcher calculated the percentage of number of similarities and differences responded correctly by the student, and then the study data was recorded on two separate graphs (Ozmen, 2011).

The purpose of this study was to compare the effectiveness of two different presentations of graphic organizers on recalling the information depicted in a compare/contrast text. The first presentation was with a teacher/researcher-constructed graphic organizer, which summarized the information depicted in an expository text before the text was read. The second presentation was a teacher/researcher-constructed graphic organizer provided for students to fill in after reading. The results of this study showed that filing and construction of graphic organizers by the students after reading was more effective than presenting teacher/researcher-constructed graphic organizers before reading. It is important to note that instead of presenting students with the full text, it was more helpful to read the text section by section, and to have the
students fill in the graphic organizers section by section. There were many factors that helped students to focus on the similarities and differences depicted in the texts. During the process of completing the graphic organizer, presentation of the blank researcher-constructed graphic organizer was provided to the students and the students were guided to focus on the important information units while reading the text. Therefore, extraneous processing did not occur with this graphic organizer, and the result was a great recall and comprehension level of the text. Further, instead of presenting the students with the full text, after reading the text section by section, completing the graphic organizers eventually helped intellectually disabled students to recall the information depicted in the texts. Students examined each unit of the graphic organizer after reading while still visualizing the unit as a whole. Overall, the way the graphic organizers were presented had important roles in improving students' knowledge about expository texts (Ozmen, 2011). Not only is the presentation of graphic organizers important for the comprehension of expository text, but the lesson plan design and implementation is important as well. The following study investigates whether a lesson that emphasizes previewing the text or a lesson that emphasizes key vocabulary words has the greater impact on comprehension in middle school students.

The researchers Burns, Hodgson, Parker, and Fremont (2011) compared the effectiveness and efficiency of two evidence-based small-group interventions for struggling eighth grade readers. According to the researchers, reading instruction for middle and high school students is focused on vocabulary and comprehension, and yet research shows that comprehension skills are alarmingly low among students in these grade levels. The researchers wanted to determine which reading comprehension intervention was most effective. Burns et al., (2011) hypothesized
that the group of students who received the keywords intervention would show the greatest increase in comprehension scores.

For this study, there were two dependent variables. The first was the number of comprehension questions answered from the passages for each condition. The second was an estimate of the efficiency of the questions asked which was computed by timing the intervention sessions (Burns et al., 2011).

The participants in this study consisted of 19 students in eighth grade attending two different middle schools in Minnesota. Fourteen females and five males participated in the study. The demographic breakdown for the students was 10.5% African American, 57.9% Caucasian, 10.5% Hispanic, and 21.1% Hmong. All students were identified as struggling readers by the school, and the mean reading standard score on the Measures of Academic Progress (Northwest Evaluation Association, 2004) for the group was one standard deviation below the national mean (Burns et al., 2011).

The schools that the students attended served sixth through eighth grade. One school had a total population of 881 students, 28% of which were from a minority background and 27.1% of which were eligible for the federal free or reduced price lunch program. The other school served 787 students, 41% of which were from minority backgrounds and 46.6% were eligible for free or reduced lunch. Students were selected if they scored below the 25th percentile on the group administered reading test used by the district. Students whose parents signed and returned the consent form were included in the study. Students were then assigned to groups of four or five based on common reading or language arts courses. Students were randomly assigned to be part of the Preview, Keywords, or Control group (Burns et al., 2011).
For administration of the pretest, the researchers used three reading passages from the Qualitative Reading Inventory-4 (QRI-4; Leslie & Caldwell, 2005). The QRI-4 was chosen because it provided passages that were long enough to assess reading comprehension and there were 10 comprehension questions for each passage. The 10 comprehension questions contained both explicit and implicit material from the text. Further, the passage and question format of the QRI-4 matched most standardized assessments of comprehension. The assessment was administered to the whole group at the same time and students were required to respond in writing for each comprehension question (Burns et al., 2011).

After the researchers assessed the students' baseline performance, students who were part of the previewing intervention condition were given a short, oral preview of the text they would be reading. Short questions and statements that were meant to engage students in text were created, as well as a synopsis of main story elements. Another preview consisted of major story elements. For this preview, the researcher described the setting, characters, point of view, and description of the plot (Burns et al., 2011).

For students who were part of the pre-teaching keywords intervention, a list of keywords was compiled for each text. Unknown keywords from the stories were typed on index cards. Researchers also compiled a list of words that would serve as easy, "known" words. These words were randomly selected from the fifth grade reading list (Fry & Kress, 2006). Students rehearsed the keywords by practicing an unknown word, then a known word, and so on (Burns et al., 2011).

After the researchers collected the baseline data, they began the interventions. The interventions occurred in small groups. The researchers investigated what effect text previewing has on reading comprehension, what effect pre-teaching keywords has on comprehension, and
how efficient small group reading comprehension interventions are among students with comprehension difficulties. Students participated in a counterbalanced order. Two of the groups received the Previewing condition first and the other two groups received the Keywords condition first. After completing the intervention, as well as recording the length of time it took to complete the intervention, students then read the assigned text passage, and wrote their responses to the 10 comprehension questions. The researcher returned the same day of the week the following week to conduct the second intervention session (Burns et al., 2011).

The first research question inquired about the effectiveness of the two intervention approaches. The researchers found that there was similar effectiveness between the two strategies but efficiency greatly favored the keyword strategy. The keyword condition led to the most comprehension questions being answered correctly. A within-subjects ANOVA resulted in a significant effect, $F(2, 36) = 8.52, p < .05$. Further, the preview condition resulted in significantly more comprehension questions being answered correctly than the baseline condition, $t (18) = 3.07, p < .01$, with a moderate to large effect ($d = .74$). The keyword condition also resulted in significantly more comprehension questions being answered correctly than the baseline condition, $t (18) = 4.47, p < .01$, with a large effect ($d = 1.09$). Thus, both interventions resulted in a significant effect. However, the differences between the two conditions resulted in a non-significant effect, $t (18) = 1.00, p = .33$ and a small effect size ($d = .22$). The second research question was addressed by computing correct answers per minute of instructional time. The previewing condition required an average of 12.38 (SD = 2.05) minutes to complete, and the keyword condition required an average of 6.70 (SD = 2.84) minutes. The previewing condition resulted in .32 correct answers per instructional minute and .83 for the keyword method. The difference between the two conditions was significant $t (18) = 5.02, p <$
The size of the effect for this comparison was large ($d = 1.62$) and favored pre-teaching keywords (Burns et al., 2011).

Pre-teaching keywords and unknown words have both been shown to increase reading fluency and word reading skills. In this study, pre-teaching key words may have led to the somewhat larger effect because the intervention also affected the reading fluency of students. This shows that pre-teaching keywords and unknown words has an even greater benefit than just improved comprehension scores. This study also shows that further investigation and research done with small-group interventions for reading comprehension would be helpful for educators. Small group interventions are an important aspect of school-based academic interventions and yet there is not as much research in this area. Overall, the study found that previewing strategies and pre-teaching keywords had a significant effect on the comprehension of students who read expository text (Burns et al., 2011).

To become a successful reader of expository text, students must understand the correlation between text structure and the use of graphic organizers. Further, many other important elements combine to help guide students through their reading. Previewing text, understanding key and unknown words, and the method in which the graphic organizers are presented all affect how students are able to understand and analyze expository text and its text structures.

**Discourse and Thinking Aloud in Expository Text**

Discourse plays an important role in students’ understanding of text, especially the more challenging expository text. From a very young age, oral language and discussion about text is important for students to further their understanding of text. This is especially important for students when reading expository text, which is more challenging. Research states that students
who have an opportunity to engage in meaningful discussion with their peers gain a greater
derstanding about what they have read and are able to make more meaningful connections,
have greater recall, and have a higher comprehension of the text than students who do not
(Vukelich, Christie, & Enz 2008). The researchers Kucan and Beck (2003) compared two
discourse environments and their effects on comprehension. The researchers investigated if the
context in which students talk about text during reading affects their comprehension and if
talking about texts with peers influences the quality of students' talk. The researchers also
sought to find out if talking about text influences individual thinking about text. The problem
researchers aimed to solve was in which group there would be the greatest effect on
comprehension. The researchers hypothesized that the greatest effect would occur when students
discussed with their peers. The variables in this study were the background knowledge,
motivation, and interest of the students.

Twenty-seven seventh grade students from two parochial schools located in a small city
in northern West Virginia participated in the study. Seventh graders were chosen because the
researchers thought this age level would have sufficient maturity to respond to text and articulate
their ideas. The students in these classrooms were of average socio-economic background and
represented a wide range of academic ability. The participants seemed to represent the wide
range of academic ability that is often found in classrooms. This was indicated by their scores on
the West Virginia Sate-County Testing Program: Comprehensive Test of Basic Skills. The
percentile range for comprehension scores was from 13 to 98, with the majority of the scores
falling in the 66-86 range. Two discourse environments were established; one discourse
environment consisted of individual students, and the other consisted of small groups of students.
Fourteen students were assigned to the group condition, and the remaining 13 students were assigned to the individual condition (Kucan & Beck, 2003).

The students read excerpts from nonfiction trade books. The texts were selected based on their potential interest, excerptibility, and readability. The researchers sought texts that required attention and engagement but would not be a topic that students would be overly familiar with. All excerpts were analyzed for readability using the Flesch Reading Ease Formula (Klare, 1984), which provides a readability score in terms of grade level equivalence. Three open-ended questions were developed for each text that would be administered after reading. One question asked students to compare and contrast, another asked students to describe some process or sequence from the excerpt, and a third required students to interpret a sentence from the excerpt (Kucan & Beck, 2003).

The study consisted of four phases, which took place over a seven-week period. The phases included a preliminary phase, a pretest phase, an intervention phase, and a posttest phase. The goal of the preliminary phase was to recruit participants and secure information that would inform their assignment to individual and group conditions. The researchers used the pretest and posttest phases to find out whether participation in the intervention influenced how students talked about texts and how students were able to recall and respond to questions about texts. During the intervention phase, the researchers sought to engage students in two discourse environments, and to analyze the kind of talk that developed in each. They sought to trace the possible effect of that talk on students' comprehension as indicated by their ability to recall and answer questions about text information (Kucan & Beck, 2003).

Kucan and Beck (2003) designed their study to have three intervention sessions, one per week for three weeks. During each session, the individuals and group members read the text
aloud, and stopped at predetermined places to respond to prompts from the investigator. In the individual condition, the environment consisted of an individual student and the investigator. The participants in the other group consisted of a group of seven students and the investigator. The prompts to create talk about the texts in both environments included prompts such as, "What do you understand so far?" or "What's going on here?" and "What do you know now?"

The researchers used student recalls, question responses, and transcripts of student talk for data sources. Student recalls were scored by comparing the content units in the recall and student responses to open-ended questions were scored by comparing them to a master response template, a listing of items that could be included in a response, and noting the number of those items mentioned by the students. The researchers analyzed a total of 99 transcripts for sequences of talk. Each transcript was reviewed to identify specific kinds of reader-text interactions revealed in the talk, and then each interaction that was identified was treated as a data point (Kucan & Beck, 2003). One of the goals of the pretest and posttest phase was to explore whether participation in the discourse that developed during the intervention sessions would affect individual students’ discourse about text when they were no longer in the intervention sessions. Although no differences were found in recall and question-response scores, differences were found in the kind of talking students did before and after the intervention. These differences were revealed by comparing pretest and posttest talk in each of the three categories: personal, textual, and intellectual (Kucan & Beck, 2003).

Students’ pretest recall and question-response scores were analyzed first to document that students assigned to the individual and group conditions were well matched. No statistically significant differences between conditions were well matched, nor were differences between conditions on pretest recall and question-response scores found. Thus, the analyses of pretest
recall and question-response scores provided evidence of comparability between students assigned to the individual and group conditions. Students’ posttest recall and question-response scores were analyzed to investigate the possible impact of the intervention on students’ individual comprehension. An analysis of the mean recall and question-response scores for students by condition revealed no significant differences. A two-way mixed model ANOVA revealed no significant main effect for condition in recall scores, or in question-response scores. Thus, student comprehension as indicated by recall and question-response scores did not differ significantly between the individual and group conditions. Based on the analysis of students’ posttest scores, participation in a particular discourse environment did not affect individual students’ ability to remember and answer questions about text (Kucan & Beck, 2003).

The study attempted to discover if the context in which students talk about text during reading affects their comprehension and if talking about texts with others influences the quality of students’ talk. The researchers also wanted to discover if experiences talking about text influence individual thinking about text. Researchers found that inviting students to communicate their understanding of text ideas as they create meaning and make connections supports their comprehension regardless of the presence or absence of others. Researchers also discovered that the follow-up prompts consistently influenced the way students presented their ideas in the group. Researchers found that there is a connection between student talk and how the students were influenced in their thinking. Overall, it was found that students need opportunities to talk about their ideas and to respond to the ideas of others. The results of this study show that the group context supported students’ dialogue and thoughtful engagement with the text. Kucan and Beck (2003) state that it is important to carefully select discussion questions so that students have the opportunities to be challenged and think at a higher intellectual level.
than if they were to simply answer recall questions about the text. The researchers state that future researchers should be aware of how to tap into multiple perspectives and alternative interpretations of text information and of their ability to make use of such perspectives when creating discourse opportunities for students. Not only is discourse an important element to consider when teaching expository text structures, but so are the processes and outcomes of thinking aloud in expository text, which the following study will investigate further.

The researchers Caldwell and Leslie (2010) investigated the processes and outcomes of thinking aloud in expository text. The researchers studied what kinds of think aloud statements were made by middle school students while reading expository text. They also investigated if thinking aloud affects comprehension as measured by recall and answers to questions, and if thinking aloud added value to the assessment of comprehension beyond what is learned through recall and question answering. The problem that the researchers wanted to solve was to understand the think-aloud statements made by middle school students as they read expository text. The researchers wanted to determine the possible effects of thinking aloud on recall and comprehension of expository text using a common coding system, and to examine the usefulness of adding a think-aloud procedure to a reading assessment that already included measures of recall and question answering. The researchers hypothesized that students would primarily paraphrase the text as they thought aloud and that they would make inferences using text information.

Sixty-eight middle school students participated in the study. Thirty-five percent of the students were in the lower middle school, grades five and six, and 65% were in the upper middle school, grades seven and eight. There were similar percentages of males, 52%, and females, 48%. 61% were Caucasian, 28% African American, 8% Hispanic American, and 3% Asian
American. These students demonstrated an instructional reading level in narrative text of either sixth or eighth grade, using the achievement test scores from either the *Iowa Test of Basic Skills* or the *Terra Nova*. Achievement scores were available for 93% of the students. The mean standard score was 692 (SD = 38.35), and the median percentile rank was 82.34 (SD = 19.01). These scores indicate that overall, these were good readers in their respective grades (Caldwell & Leslie, 2010).

The materials used were social studies and science texts published by Addison Wesley, designed to be used at sixth and eighth grade levels. The readability estimates of the materials were determined through the use of the Readability Estimator computer program (Hardy & Jerman, 1985) using the Dale-Chall estimate and the Fry Readability Graph. The Harris-Jacobson readability estimate was calculated by hand. Chapter sections of 500-800 words were divided into two passages. The readability of both passages was comparable, and explicit and implicit comprehension questions were also developed for each text. Passages were modified to include specific locations for the students to stop and think-aloud (Caldwell & Leslie, 2010).

All students were tested individually, and the sessions were tape recorded and transcribed. Students read two texts on the same general topic; thinking aloud in one and reading without thinking aloud in the other. Before the students read the expository texts, the examiner modeled thinking aloud by reading an excerpt from a social studies text. Modeling was necessary in order to ensure that students understood the think-aloud process. After listening to the modeling, students read either a science or social studies text chosen by the examiner. The students were then given the option to read the passage silently or orally. Half of the participants thought aloud at predetermined stop points while reading the first segment of the chapter section, and half thought aloud while reading the second section. Each student read the alternative
section without thinking aloud. The determination of whether a student thought aloud while reading the first or second section was random (Caldwell & Leslie, 2010).

The researchers found that examining the frequency of errors made during think-alouds and retelling would help to better interpret the results. The number of clauses in each passage was used as the denominator to determine the proportion of error made either in retelling or in thinking aloud on each passage, and then the proportions were averaged. The researchers investigated the match between the content included in the think-aloud and the content recalled. The difference between recall and answers to questions after thinking aloud and after reading without engaging in thinking aloud was analyzed. Overall, the researchers found that when middle school students read expository texts, they paraphrased more often than they made inferences both when thinking aloud and during recall. They made associative inferences using text information. Associative inferences were text-based, so students made text-to-text inferences. Thinking aloud was associated with more associative inferences in recall, and this correlated negatively with the ability to answer comprehension questions. Overall, the content of thinking aloud may provide a more sensitive picture of readers' processing than unaided recall or answers to questions. When thinking about how to teach students to think-aloud while reading, it is first important to consider the purpose of the think-aloud. If the purpose of the think-aloud is to build a text-base measured by the number of questions correctly answered, students should be encouraged to paraphrase. If the purpose is to generate inferences, then students should be encouraged to engage in thinking aloud. The students in this study made general associative inferences. Associative inferences can be understood as embellishment of text information. These kinds of inferences enrich and fill in detail but do not focus on explanations and consequences which are vital to comprehension of expository text. Therefore, these findings
suggest that middle school students should receive explicit instruction in generating explanatory and predictive inferences in order to gain the central knowledge needed to comprehend expository text (Caldwell & Leslie, 2010).

Explicit instruction in the use of graphic organizers and text structure are skills that middle school students must have to become successful readers of expository text. Further, participating in meaningful discourse and thinking aloud are helpful methods for students to improve their comprehension of text and to add to their reading success. All middle school students, and especially those with learning disabilities, would benefit from interventions in the area of expository reading. Teaching text structure for expository texts would be an effective technique for teachers to improve reading achievement averages (Caldwell & Leslie, 2010).

**Conclusion**

Successful reading of expository text is a must as students make the shift from learning to read to reading to learn. Across the years of school, student awareness of text structures must increase as they progressively shift from reading a story line or casual text to reading for information (Pressley, 1992). Williams et al., (2007) found that teaching expository text to students at the elementary level was successful when the program included instruction in text structure, emphasizing clue words, generic questions, graphic organizers, and close analysis of paragraphs. The effects of increasing comprehension of expository text in students with learning disabilities at the middle school level was successful when the interventions included explicit instruction, systematic lessons, and the use of graphic organizers. Kucan and Beck (2003) found that the process of comprehending expository text should also include opportunities for students to engage in meaningful discourse with their peers and teacher. Teaching students to think-aloud through paraphrasing is another important way to facilitate students’ comprehension of
expository text. Teaching students to generate explanatory and predictive inferences in order to gain the most central knowledge is needed to comprehend expository text (Caldwell & Leslie, 2010). Students at all age and ability levels need explicit instruction in the area of comprehension of expository text. Intervention models should include key and unknown word instruction, previewing the text, identifying text features, identifying text structure and signal words and phrases, reading the expository text while incorporating thinking aloud, utilization of a graphic organizer, discussing with peers and teacher, and successfully completing a written summary using the graphic organizer (Pressley, 2002).

Comprehension is an important component and it must be taught explicitly using different instructional practices and assessments. Based upon the theoretical perspectives of Vygotsky, Block, and Duffy, the researcher devised an intervention plan to meet the needs of students struggling with comprehension. Different instructional practices and assessments must be used when teaching literacy (Block & Duffy, 2008). This research confirmed that a successful intervention in comprehension of expository text for elementary level students with high fluency but low comprehension rates would include explicit instruction in the use of graphic organizers and in the understanding of text structure. The incorporation of Vygotsky’s theory that the instruction students receive should be slightly above their developmental level, The Zone of Proximal Development, is critical for student literacy success. The teacher must scaffold the process until the student can complete the task independently, and this process was evident throughout the intervention. The researcher explicitly modeled and taught key and unknown vocabulary words as well as focus on the signal words and phrases for recognizing expository text structure. The intervention included careful and explicit modeling in the use of graphic organizers followed by systematic guided practice and independent practice. The intervention
lesson concluded with written summary statements and illustrations where students used information from the graphic organizer experience to complete detailed and factual sentences. The following chapter describes the methodology used to carry out the intervention shaped by the theories and research described in this chapter.

Chapter 3

Introduction

The purpose of this study was to determine the effect of explicit instruction in the use of graphic organizers and text features in students reading expository text that have high fluency rates but low comprehension rates. One of the most efficient strategies for which there is an influx of research and practice is training students on text structure knowledge, the use of graphic organizers, and the utilization of text features, to facilitate their comprehension of expository text (Block & Duffy, 2008). Research states that students who understand the idea of text structure and how to analyze it are likely to learn more than students who lack this understanding (RAND Reading Study Group, 2002). Findings also indicate that text features can help readers locate and organize information from the text (Block & Duffy, 2008). Research shows that graphic organizers help students identify main idea, supporting ideas, and supporting details, in order to more effectively understand and comprehend expository text (Armbruster, 2004). This chapter will describe the action research subjects, the procedure used for intervention, and the data collected throughout the intervention process.

Action Research Subjects

The children in this study were students from the researcher’s first grade classroom. The students attend a parochial school in Whitefish Bay, Wisconsin. The school the students attend serves approximately 430 students junior kindergarten through eighth grade, and serves primarily
middle-upper socio-economic status children. The students are Caucasian as are over 97% of the students in the school population. At the time of the study the mean age was 7 years and 1 month old, and the range of ages was from 6 years 6 months to 7 years 6 months. The students were chosen for this research study based on their high fluency but low comprehension rates.

Student 1 was 7 years 1 month at the time the study began. The researcher, who is also the student’s classroom teacher, stated that student 1 was enthusiastic about school, strong in all academic subject areas, and frequently the first one finished with her work. Her parents state that she is fun, clever, and highly competitive. Student 1 is a strong reader and tested at a third grade instructional reading level. She is skilled at quickly completing school work, but this impacts her ability to show accuracy with comprehension related activities. Student 1 has a reading rate that is well above grade level and her attention when reading is mainly focused on quickly decoding the text. This impacts her ability to answer questions relating to the text discussions and/or on unit tests.

Student 2 was 6 years 3 months at the time of the study. Like student 1, student 2 tested at a third grade instructional reading level. Student 2 is a strong student, especially in math. He is very verbal, participates frequently, and asks questions when he does not understand something. His parents state that he is a voracious reader, especially of Magic Tree House and Star Wars books. Student 2 often relies on look backs to recall what was read in a story. Due to his tendency to choose only narrative texts, he struggles with comprehension of expository text. This causes frustration for him when completing a sentence or story reflection about the book.

Student 3 was 6 years 5 months at the time of the study and tested at a third grade instructional reading level. His classroom teacher states that while student 3 is a fluent reader, he
struggles to independently re-tell and summarize in his own words. When working on these strategies in school, student 3 utilizes look-backs to complete story maps and story responses.

Student 4 was 7 years 3 months at the time of the study and tested at a fourth grade instructional reading level. Student 4 is fluent reader but often guesses at multi-syllable words, affecting her comprehension of the text. Student 4 is easily distracted and has a difficult time completing story response sentences when the response requires recall of main ideas and supporting details from the text.

Prior to the intervention, the students were given the Phonological Awareness Literacy Screening, or PALS. This assessment provides a comprehensive examination of young children’s knowledge of the important literacy fundamentals that are predictive of future reading success. PALS assessments are designed to identify students in need of additional reading instruction beyond that provided to typically developing readers. PALS inform teachers’ instruction by providing them with explicit information about their students’ knowledge of literacy fundamentals (Invernizzi, M., Meir, J., & Juel, C. 2007). Students were also given the Woodcock Reading Mastery Test, or the WRMT-III. The WRMT-III helps to evaluate struggling readers, identify specific strengths and weaknesses in reading skills to plan targeted remediation, guide educational selection and placement decisions, screen for reading readiness, and determine reading strategies for students with special needs. The WRMT-III assessed students in word comprehension, passage comprehension, and listening comprehension (Woodcock, 1998). Students were also assessed using the Qualitative Reading Inventory-IV, or QRI-IV. This is an informal reading inventory designed to provide diagnostic information about the conditions under which students can identify words and comprehend text successfully and
the conditions that appear to result in unsuccessful word identification, decoding, and comprehension (Caldwell & Leslie, 2005).

**Procedures**

The intervention began with whole-group instruction which took place four to five times per week. The intervention followed with small-group instruction for approximately 30 minutes each session. Each week, students were introduced to the text structure being studied: description, sequence, compare/contrast, cause/effect, or problem/solution. Each text structure was studied for one week before a new text structure was introduced. In the whole-group instruction signal words for each text structure were highlighted, emphasized, and added to a classroom display. After students were familiar with signal words and phrases, they found them within the text and then used them to recognize the structure of the text. The students were presented with an expository text passage matching the text structure. The researcher taught the vocabulary words found in the expository text passage that were related. After learning important vocabulary, the correlating graphic organizer was presented. The researcher modeled and completed the graphic organizer using the first expository text passage. The second expository text passage was introduced, and the researcher modeled the process for the students, but released responsibility and students completed the graphic organizer independently (Vygotsky, 1978). Students were then given the opportunity to work with their peers and look back at the expository passage and add additional information to their graphic organizer (Caldwell & Leslie, 2010). During this time, the researcher met with the small group of four students for 20-30 minutes to expand on the activities completed as a whole class. The intervention session was divided into four parts: signal and vocabulary words lesson, modeling of graphic organizer, looking back, and oral or written summarization of the text. The lesson
began with a review of the signal words for that particular text structure. During the first week of the intervention, the students studied the text structure of description. The students learned description signal words, such as: for example, characteristics, for instance, such as, is like, including, and to illustrate. Students were shown how the author used these words within an expository text paragraph, and how the words give clues about the text structure of the passage. They circled or highlighted the signal words in the expository text and the signal words were added to our bulletin board display for reference. Following the signal word analysis, the vocabulary words for the expository passage were reviewed and used in a supportive context (Williams et al., 2007).

The researcher again modeled the process of how to use a graphic organizer and how to locate the main idea and supporting details in the text. Each week, students worked with two expository text passages for one particular text structure. For the first text passage, the researcher modeled how to use the graphic organizer and students were given a completed graphic organizer before they started working with the text. For the second expository text passage, the process was again modeled for the students, and they were given a partially complete graphic organizer that they then completed on their own. In the small group, students then worked individually and in pairs to look back through the text and add more information to their graphic organizer (Williams et al., 2009).

Following the use of the graphic organizer and look back, students were then asked to share what they had learned. In the first two weeks, students were asked to write two or three factual sentences and to draw a picture about what they had learned. Students wrote sentences using graphic organizers and received explicit directions to focus on the main idea and
supporting details. In the final three weeks, students were asked to give an oral and written summary.

**Data Collection**

A pretest-posttest research design served as the framework for this study. Prior to the study, the students were given the fall PALS assessment, which is an assessment that measures alphabetic knowledge, word identification, phonics, and passage fluency. At the start of the study, the students were administered the WRMT-III and the QRI-IV. Each of these assessments was administered following the 24 session intervention program. Following the assessments, the students began the 12 hour intervention process consisting of 24 sessions.

**Conclusion**

The students’ fall PALS assessment results showed that intervention was needed in the area of comprehension strategies. Research shows that as children progress through school, their awareness of text structures must increase as they shift from reading narrative text to reading expository text (Pressley, 1992). Therefore, the intervention that was planned includes activities to promote the student success in this area. Through explicit instruction in signal words and phrases, students learned to identify text structure and to understand how the passage was going to develop. Each session allowed students to grow in their vocabulary development and understanding of text features. Through explicit instruction and teacher modeling, students understood how to use a graphic organizer while reading expository text. Students participated in written and oral retellings of what they had read using their graphic organizer. Each session allowed students to participate in look backs and to learn how to look back in the text for greater understanding. The data collection process was determined to show progress over the course of
the intervention in understanding of text structure, text features, and the use of graphic organizers.

Chapter Four

Results

Chapter 4 discusses results of the assessments that were used to collect data throughout the 5 weeks of intervention. The purpose of the intervention was to determine the effect of explicit instruction in the use of graphic organizers with four first grade students reading expository text that have high fluency rates but low comprehension rates. Pretest scores were compared to posttest scores to show growth throughout the intervention. One qualitative measure of assessment and two standardized measures of assessment were used for both the pretest and the posttest. Also included in this chapter are researcher observations. These observations are divided into the three parts of the intervention; text structure, graphic organizers, and response writing.

Assessments

Pretest and posttest scores were compared to analyze the data collected throughout the intervention process. The first assessment that was administered was the Phonological Awareness Literacy Screening (PALS) (Invernizzi, M., Meir, J., & Juel, C. 2007). This standardized assessment was used to evaluate reading fluency and comprehension before and after the study. The next assessment that was administered was the Qualitative Reading Inventory—Fourth Edition (QRI-IV) (Leslie & Caldwell, 2005). The QRI-IV is an individually administered informal reading inventory. It was designed to provide a variety of different opportunities to observe a student’s reading behavior. The QRI-IV is a qualitative measure of assessing a child’s reading level through use of word recognition lists, reading passages, recall,
EFFECTS OF GRAPHIC ORGANIZERS

and comprehension questions (Leslie & Caldwell, 2005). The final assessment that was administered was the Woodcock Reading Mastery Tests, Third Edition (WRMT-III) (Woodcock, 2011). The WRMT-III was used to provide the researcher with information about the student’s listening comprehension, word comprehension, and passage comprehension.

**Phonological Awareness Literacy Screening (PALS)**

There is a strong relationship between a child’s fluency and comprehension. Being a fluent reader is an essential element to comprehend what is being read in a text. However, simply because a child is a fluent reader does not mean they can comprehend the text. Students must receive explicit instruction in comprehension strategies, text structures, and text features in order to be equipped with the tools they need to understand a text (Armbruster, 2004).

This assessment was administered as a pretest and as a posttest. For all assessments, the researcher worked with each student in a quite classroom free of distractions. The test took approximately 20 minutes to complete for each child. At the time of the pretest, Student 1 was 7 years 4 months. Student 1 read at a third grade instructional level, with 93% accuracy. Her fluency rating was a level three, out of three levels total. According to the fluency rating guide, level three states that the child read in meaningful phrase groups and was expressive and fluent. Student 1 received a comprehension score of three out of six questions answered correctly.

Student 2 was 7 years 1 month at the time of the pretest. Student 2 read at a third grade instructional level, with 95% accuracy. His fluency rating was a level three. Student 2 was able to answer two out of six comprehension questions correctly. Student 3 was 7 years 2 months at the time of the pretest. Student 3 read at an instructional third grade reading level, with 94% accuracy. His fluency rating was also a level three and his comprehension score was four out of six questions answered correctly. Student 4 was 7 years 6 months and her assessment results
showed that she read at an instructional fourth grade reading level, with 95% accuracy. The fluency rating for student 4 was a 3 and she answered three out of six comprehension questions correctly. According to the PALS data results, these comprehension scores were “extremely low” given each student’s instructional levels and fluency ratings. The posttest showed growth for each child. At the time of the posttest, Student 1 was 7 years 5 months, Student 2 was 7 years 2 months, Student 3 was 7 years 3 months, and Student 4 was 7 years 7 months.

The posttest showed that Student 1 read at a fourth grade instructional level, with 96% accuracy. Her fluency rating remained consistent at a level three. Student 1 received a comprehension score of five out of six questions answered correctly. Student 2 was 6 years 6 months at the time of the posttest and remained consistent at a third grade instructional level, with 97% accuracy. His fluency rating also remained a level three, but his comprehension score increased to four out of six questions answered correctly. Student 3 was 6 years 8 months at the time of the posttest. Student 3 read at an instructional fourth grade reading level, with 96% accuracy. His fluency rating remained a level three and his comprehension score was six out of six questions answered correctly. Student 4 was 7 years 6 months and her posttest results showed that she read at an instructional fourth grade reading level, with 98% accuracy. The fluency score for student 4 remained a three and she answered six out of six comprehension questions correctly. See Figure 1. for PALS Test score analysis.
As students move from the primary to intermediate grades, a shift in reading material occurs. Students’ awareness of expository text and text structures must increase as they progressively shift from reading a story line or casual text to reading for information. Students must receive explicit comprehension instruction to be successful when reading expository text (Pressley, 1992). The QRI-IV provides three ways for the teacher or researcher to assess comprehension: student unaided recall, questions without look-backs, and questions with look-backs. The QRI-IV has eight comprehension questions total; four are explicit questions and four are implicit questions (Caldwell & Leslie, 2005).

The QRI-IV was administered as a pretest and posttest. The test took approximately 30 minutes to complete for each child. The researcher administered the test in a quiet classroom free of all noise and distractions. Student 1 read the third and fourth grade QRI-IV expository passages *Cats: Lions and Tigers in Your House* and *Busy Beavers* for the pre and posttests. The results from the reading of the passage *Cats: Lions and Tigers in Your House* show a gain of one
level, from instructional to independent. In the story *The Busy Beaver*, student 1 also showed a gain of one level, from frustration to instructional. See Table 1 for Student 1 QRI-IV analysis

<table>
<thead>
<tr>
<th>Cats: Lions and Tigers in Your House</th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Gain/Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit</td>
<td>3/4</td>
<td>4/4</td>
<td>+1</td>
</tr>
<tr>
<td>Implicit</td>
<td>4/4</td>
<td>4/4</td>
<td>+0</td>
</tr>
<tr>
<td>Total</td>
<td>7/8</td>
<td>8/8</td>
<td>+1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level</th>
<th>Instructional</th>
<th>Independent</th>
<th>One Level</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>The Busy Beaver</th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Gain/Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit</td>
<td>3/4</td>
<td>4/4</td>
<td>+1</td>
</tr>
<tr>
<td>Implicit</td>
<td>2/4</td>
<td>3/4</td>
<td>+1</td>
</tr>
<tr>
<td>Total</td>
<td>5/8</td>
<td>7/8</td>
<td>+2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Level</th>
<th>Frustration</th>
<th>Instructional</th>
<th>One Level</th>
</tr>
</thead>
</table>

Table 1. Student 1 Pretest and Posttest performance on QRI-IV

Student 2 also read *Cats: Lions and Tigers in Your House* as well as *The Busy Beaver*. Student 2 made a gain of one level on the passage *Cats: Lions and Tigers in Your House* but remained at the same instructional level for the passage *The Busy Beaver*. See Table 3 for Student 2 QRI-IV analysis
Table 3. Student 2 pretest and posttest performance on QRI-IV

Student 3 was also was administered the same passages as the previous students. Student 3 made a gain of two instructional levels on the passage *Cats: Lions and Tigers in Your House* and one instructional level on the passage *The Busy Beaver*. See Table 4. for Student 3 QRI-IV analysis.
### Table 4. Student 3 pretest and posttest performance on QRI-IV

<table>
<thead>
<tr>
<th></th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Gain/Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cats: Lions and Tigers in Your House</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explicit</td>
<td>3/4</td>
<td>4/4</td>
<td>+1</td>
</tr>
<tr>
<td>Implicit</td>
<td>2/4</td>
<td>4/4</td>
<td>+2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>5/8</td>
<td>8/8</td>
<td>+3</td>
</tr>
<tr>
<td><strong>Level</strong></td>
<td>Frustration</td>
<td>Independent</td>
<td>Two Levels</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>The Busy Beaver</strong></th>
<th>Pre-Test</th>
<th>Post-Test</th>
<th>Gain/Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explicit</td>
<td>4/4</td>
<td>4/4</td>
<td>+0</td>
</tr>
<tr>
<td>Implicit</td>
<td>3/4</td>
<td>4/4</td>
<td>+1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>7/8</td>
<td>8/8</td>
<td>+1</td>
</tr>
<tr>
<td><strong>Level</strong></td>
<td>Instructional</td>
<td>Independent</td>
<td>One Level</td>
</tr>
</tbody>
</table>

Student 4 was also administered the passage *The Busy Beaver* and *Tomie dePaola* for the second expository pre and posttest passage. Student 4 made a gain of one instructional level for both passages. See Table 5. for Student 4 QRI-IV analysis.
Table 5. Student 4 pretest and posttest performance on QRI-IV

**Woodcock Reading Mastery Tests (WRMT-III)**

Over the years, reading comprehension has changed its emphasis from the mastery of skills and sub-skills that are learned automatically to a focus on learning strategies, which are adaptable, flexible, and, most important, in the control of the reader (Block & Duffy, 2008). In order to effectively teach these strategies, the reading readiness and achievement must be evaluated so that effective instruction and intervention can be implemented (Block & Duffy, 2008). Three subtests from the WRMT-III were used to assess students; listening comprehension, word comprehension, and passage comprehension.

This assessment was administered as a pretest and posttest. The researcher worked with each student in a quiet classroom free of all distractions. The test took approximately 20 minutes to complete. Using age norms, the pretest demonstrated that the reading comprehension age equivalency of student 1 was that of a 7 year 9 month old with the grade equivalency of 2.0. The standard score for the reading comprehension of student 1 was 101, which is in the 53rd percentile. Her listening comprehension demonstrated the equivalency of a 6 year 5 month old with the grade equivalency of 1.0. Her standard score for listening comprehension was 84. Her word comprehension and passage comprehension were standard scores of 102 and 100.
respectively, in the 55th and 50th percentiles, and a grade equivalency of 2.0. According to the WRMT-III graphical profile the scores of student 1 fall into the “manageable” proficiency category for reading comprehension, word comprehension, and passage comprehension. The listening comprehension scores for student 1 fall into the “very difficult” proficiency category for listening comprehension. The posttest showed growth. At the time of the posttest, student 1 was 7 years 5 months. Following the intervention the reading comprehension age equivalency for student 1 was that of a 8 year 10 month old. Her standard score for reading comprehension was 115, which is the 84th percentile. Her listening comprehension demonstrated the equivalency of an 8 year 0 month old with the grade equivalency of 2.5. Her standard score for listening comprehension was 103. The word comprehension and passage comprehension standard scores of student 1 were 118 and 110 and in the 88th and 75th percentiles. According to the WRMT-III graphical profile, the scores of student 1 are now in the “very easy” range for reading and word comprehension and “easy” range for passage comprehension and “manageable” range for listening comprehension. See figure 2. for WRMT-III Reading Comprehension test scores analysis.

\[\text{Figure 2. Student 1 Pretest and posttest Reading Comprehension performance on WRMT-III}\]
Student 2 was 7 years 1 month at the time the pretest was administered. Using age norms, the pretest demonstrated that his reading comprehension age equivalency was that of a 6 year 7 month old with the grade equivalency of 1.0. His standard score for reading comprehension was 86, which is the 18th percentile. His listening comprehension demonstrated the equivalency of a 6 year 0 month old with the grade equivalency of below 1.0. The standard score for listening comprehension of student 2 was 68. His word comprehension and passage comprehension were standard scores of 92 and 82 respectively, in the 111th and 95th percentiles, and with a grade equivalency of first. According to the WRMT-III graphical profile the scores of student 2 fell into the “difficult” proficiency category for reading comprehension and word comprehension and “very difficult” for passage comprehension. The scores of student 2 fell into the “extremely difficult” proficiency category for listening comprehension. The posttest showed growth. At the time of the posttest, student 2 was 7 years 2 months. Following the intervention the reading comprehension age equivalency for student 2 was that of a 7 year 6 month old with a grade equivalency of 2.0. His standard score for reading comprehension was 103, which is the 58th percentile. His listening comprehension demonstrated the equivalency of a 7 year 3 month old with the grade equivalency of first. His standard score for listening comprehension was 99. The word comprehension and passage comprehension standard scores for student 2 were 111 and 95 and in the 77th and 37th percentiles. The scores for student 2 are now in the “easy” range for reading comprehension, “manageable” range for passage comprehension and listening comprehension, and “easy” range for word comprehension. See Figure 3. for WRMT-III Reading Comprehension test scores analysis.
Student 3 was 7 years 1 month at the time the pretest was administered. Using age norms, the pretest demonstrated that his reading comprehension age equivalency was that of a 7 year 5 month old with the grade equivalency of end of first. His standard score for reading comprehension was 100, which is the 50th percentile. His listening comprehension demonstrated the equivalency of less than a 6 year 0 month old with the grade equivalency of less than first. The standard scores for student 3 in listening comprehension were 68. His word comprehension and passage comprehension were standard scores of 102 and 92 respectively, in the 55th and 45th percentiles, with a grade equivalency of 2.0. According to the WRMT-III graphical profile, the scores for student 2 fell into the “manageable” proficiency category for reading comprehension, word comprehension, and passage comprehension. The scores fell into the “extremely difficult” category for listening comprehension. The posttest showed growth. At the time of the posttest, student 3 was 7 years 3 months. Following the intervention the reading comprehension age equivalency for student 3 was that of an 8 year 6 month old with a grade equivalency of 2.9. His standard score for reading comprehension was 115, which is the 84th percentile. His listening comprehension demonstrated the equivalency of a 7 year 3 month old with the grade equivalency
of first. His standard score for listening comprehension was 99. The word comprehension and passage comprehension standard scores for student 2 were 118 and 110 and in the 88th and 75th percentiles. According to the WRMT-III graphical profile, the scores for student 3 are now in the “very easy” range for reading comprehension and “manageable” range for listening comprehension and “very easy” range for word comprehension and passage comprehension. See Figure 4. for WRMT-III Reading Comprehension test scores analysis.

![Figure 4. Student 3 Pretest and posttest Reading Comprehension performance on WRMT-III](image)

Student 4 was 7 years 5 months at the time the pretest was administered. Using age norms, the pretest demonstrated that her reading comprehension age equivalency was that of a 7 year 2 month old with the grade equivalency of 1.0. Her standard score for reading comprehension was 93, which is the 32nd percentile. Her listening comprehension demonstrated the equivalency of less than a 6 year 0 month old with the grade equivalency of below 1.0. The standard scores for student 4 in listening comprehension were 67. Her word comprehension and passage comprehension were standard scores of 86 and 100 respectively, in the 18th and 50th percentiles, and with a grade equivalency of second. According to the WRMT-III graphical profile, the scores for student 4 fall into the “manageable” proficiency category for reading.
comprehension and passage comprehension. The scores fell into the “extremely difficult” category for listening comprehension and “very difficult” for word comprehension. The posttest showed growth. At the time of the posttest, student 4 was 7 years 7 months. Following the intervention the reading comprehension age equivalency for student 4 was that of a 9 year 0 month old with a grade equivalency of 3.9. Her standard score for reading comprehension was 116, which is the 86th percentile. Her listening comprehension demonstrated the equivalency of a 7 year 3 month old with the grade equivalency of first. Her standard score for listening comprehension was 111. Word comprehension and passage comprehension standard scores for student 4 were 110 and 119 and in the 75th and 90th percentiles. According to the WRMT-III graphical profile the scores for student 4 are now in the “very easy” range for reading comprehension and “easy” range for word comprehension and “very easy” range for listening comprehension and passage comprehension. See Figure 5. for WRMT-III Reading Comprehension test scores analysis

Figure 5. Student 4 Pretest and posttest Reading Comprehension performance on WRMT-III
**Researcher Observation**

Throughout the intervention process the researcher took detailed notes and kept thorough records which helped display the progress the four students made during the intervention. These observations are divided into the three parts of the intervention; text structure, graphic organizers, and response writing. At the beginning of each lesson the researcher reviewed the purpose and importance for students to understand different types of text structure. The researcher conducted a portion of the intervention with a whole class lesson that introduced the text structure organizational pattern. The researcher then worked with the small group of four students to ensure individual differentiation and understanding. The students were encouraged to use the signal words to identify the organizational pattern and to share their findings with the class. Following the text structure analysis, the researcher provided the students with key concepts and vocabulary words for the passage and students had the opportunity to spend time sharing their prior knowledge of the subject matter. This portion of the lesson gave students the opportunity to explore text features within the passage. Once students were familiar with the text structure being studied, they were then introduced to the graphic organizer. The students were given the opportunity to read the passage both silently and in partners. Following the reading students were directed to use the signal words in the passage to organize the passage content on their graphic organizer. The final portion of the intervention was response writing. This task allowed the students to organize statements they generated from the graphic organizers. Since summarization skills are so complex, students were provided with paragraph frames for the first three weeks of the intervention. At the end of each lesson, the teacher and students reviewed the signal words, vocabulary, strategies, graphic organizers, and responses.
Text Structure

The text structure portion of the intervention began with a whole-class introduction to the following: description, sequence, cause-effect, compare-contrast, and problem solution. One text structure was studied each week. The passages that were chosen were all expository and correlated to the students’ reading series and topics of study in social studies and science. Students studied lion cubs and lion prides, the Milwaukee Art Museum, dinosaurs, heroic events, and plants. The text structure pattern was introduced, and the researcher pointed out the signal words that suggested the structure. Students created a bulletin board display with the signal words to use a reference point throughout the intervention. The four students received small-group instruction with example passages where they had the opportunity to pick out signal words and present their findings to the class. The researcher gave prompts throughout reminding students of the signal word while scaffolding their ability to locate these words within the passages. As the intervention progressed, students were able to identify the signal words quickly and with less prompting. The description and sequence text structures proved to be the easiest for the students while cause-effect and problem solution were the most difficult due to the unfamiliar signal words. At the beginning of the intervention, students were unable to state why it was important for them to learn text structure whereas at the end of the intervention, students clearly stated that most of their reading in school would consist of expository text.

Graphic Organizers

The next portion of the intervention consisted of the presentation of graphic organizers to visually represent the structure. The graphic organizers were presented before reading to serve as a framework for comprehending and retelling after reading. The researcher presented the graphic organizer as a whole-class lesson and then read the expository text aloud while modeling
her own thinking. At the beginning of the intervention, the students dictated their contribution to the researcher and she filled it in using their class Activboard. As the intervention progressed, the students and researcher continued completing graphic organizers together. The researcher eventually released responsibility and students were able to complete the graphic organizers independently. The researcher followed up with the small group of students to check for understanding and to allow for individualized attention. The small group time allowed for opportunities to look back, locate, and fill in missing information. At the beginning of the intervention, this was more difficult for students. The cause-effect and problem solution graphic organizers were the most difficult for students to complete because of their complex nature. They had a difficult time identifying the problem in the problem solution graphic organizer. The compare-contrast graphic organizers about dinosaurs seemed to be the most interesting and motivating because the students were enthusiastic about the topic. The researcher gave prompts throughout and encouraged students to attempt their own retelling and summarizing while constructing the organizers. This small group also allowed the researcher time to ask implicit and explicit questions about the text to check for understanding. The students’ large vocabularies and motivation to learn about the passage topics proved to be helpful during the graphic organizer portion of the lessons. The researcher gave very explicit directions and spent time modeling how to use a graphic organizer from the beginning of the intervention to the end.

**Written Responses**

This portion of the intervention consisted of students generating summative sentences using their graphic organizers. Responding to text through writing was a challenge for the participants prior to the intervention. Students often struggled to make meaning of the text and this took away from the reading process. Therefore, providing a written response proved to be a
daunting task for students. Throughout the course of the intervention, students discovered that using a graphic organizer greatly helped with recall and summarization. Each week, the researcher explicitly modeled to the whole-class how to generate a main idea using the graphic organizer. In the beginning, students depended on look backs and often copied the text word-for-word from the text which showed limited understanding of the text. After the researcher modeled how to use the graphic organizers to generate a topic sentence, the students became more comfortable in doing the same. During work time, the researcher modeled this process and scaffolded student learning. Eventually, students were given responsibility to complete the graphic organizers independently. By the third week and exposure to their third expository text structure, students were able to successfully generate a topic sentence on their own and follow with supporting details. Written responses were easiest for the text structures that students more easily understood. For example, students wrote more in response to the descriptive text structure about lion prides than the cause and effect text structure about heroic people. During this portion of the intervention, students engaged in rich discussions with each other about their writing and were anxious to share their responses. The opportunities for student discussion helped the students to form deeper meaning and connections with the text. This led to much greater comprehension levels for the students.

Conclusion

This study investigated the effects of explicit instruction in the use of graphic organizers for four first grade students reading expository text that have high fluency rates but low comprehension rates. This intervention included a pretest-posttest analysis of scores to demonstrate growth throughout the intervention. Study results indicated that gains were made in all of the tested areas which showed the effects an intervention containing text structure, graphic
organizers, and response writing has on four students with low comprehension but high fluency. Chapter 5 will discuss in more detail the action research results while listing the strengths and limitations of this research as well as educational recommendations.

**Chapter 5**

**Conclusions**

The research conducted determined the effects of explicit instruction in the use of graphic organizers and text features in students reading expository text that have high fluency rates but low comprehension rates. Data collected over 12 hours of intervention showed growth in the four students’ reading comprehension. Scores from the pretest were compared to scores from the posttest to determine progress. The case study participants, students 1, 2, 3, and 4, were first grade students attending a suburban parochial school in Whitefish Bay, Wisconsin. At the time of the study the students had a mean age of 7 years 3 months old. According to the fall 2011 PALS assessment, the four students had high fluency but below average comprehension scores when compared to their same-age peers. To become successful literacy learners of expository text students need to understand the structure and arrangement of ideas as well as the relationships among the ideas in order to approach reading with a plan (Saenz & Fuchs, 2002; Williams, Hall, & Lauer, 2004; Williams, Hall, Lauer, Stafford, DeSisto and deCani, 2005; Williams, Stafford, Lauer, Hall, and Pollini, 2009). Wisconsin Common Core State Standards focusing on comprehension skills and strategies are supported by the research. There are several Wisconsin Common Core State Standards, Reading Standards for Informational Text K-5, met throughout the intervention. Standards five, seven, nine, and ten all directly relate to the intervention. These standards address the importance of text features, similarities and differences between texts, and use of complex text with appropriate instruction (Common Core
State Standards Initiative, 2011). The data collection demonstrated that the four students made gains in the area of comprehension of expository text. Chapter 5 will connect this intervention to current research conducted in this area, as well as include an explanation of the results. Strengths and limitations for the study will also be discussed in addition to recommendations for further study.

**Connection to Research and Explanation of Results**

Data were analyzed to determine the effects of explicit instruction in the use of graphic organizers and text features in students reading expository text that have high fluency rates but low comprehension rates. The pretests were compared to the posttests to determine growth in comprehension of expository text through the study of text structure, graphic organizers, and written responses.

**Text Structure**

Teaching text structure for expository texts has shown to be an effective technique to improve reading achievement. Williams et al., 2004 studied the effects of teaching students text structure as early as second grade to improve their comprehension of expository text. This research showed that children as early as second grade are sensitive to text structure and would benefit from explicit comprehension instruction. The succeeding study showed that instruction focused on text structure helped second-grade students improve their comprehension of compare and contrast expository text. The instruction focused on three strategies where students were taught how to use clue words to identify a text as compare and contrast, taught how to use a graphic organizer to lay out the relevant information in the text, and taught a series of questions that would help them focus on the important information in the text (Williams et al., 2004).
The researchers Williams, Nubla-Kung, Pollini, Staffard, Garcia, and Snyder (2007) studied the effectiveness of a comprehension program integrated with social studies instruction designed for at-risk second graders. The program included instruction in cause-effect text structure. During the intervention, prompts were given to students to locate clue words, and explicit instruction was given on how to identify cause-effect target paragraphs. Children who participated in the cause-effect text structure focus group demonstrated great progress in comprehension. The researchers found that this program represents the type of listening and reading instruction that can work at this grade level for all students, including those at risk for academic failure.

Both of these research studies supported the effectiveness of including explicit instruction in the area of text structure in an intervention for students with low comprehension. On the first day of the intervention, students were not able to identify the difference between narrative and expository texts; following the final session of intervention, students were able to differentiate the difference between the two types of text. The students showed growth in the area of identifying text structure for each passage. The students were able to correctly identify description, sequence, and compare and contrast; however, they struggled with identifying cause and effect as well as problem solution. As the intervention progressed the students were able to locate signal words without prompting and they gained confidence in choosing expository text more often during free reading time. According to the pretest and posttest for comprehension each student made gains in his or her listening, word, and passage comprehension. This portion of the intervention supports Williams’ et al., (2004) research that states, children as early as second grade are sensitive to text structure and would benefit from instruction. The research Williams et al., 2007 conducted found that a literacy program including lessons on text structure
represents the type of listening and reading instruction that can work at a primary grade level for all students.

**Graphic Organizers**

Graphic organizers are designed to facilitate the teaching and learning of textual material in a visual and spatial manner. Kim et al. (2004) completed an extensive search of professional literature and research articles to analyze data on the use of graphic organizers with students who have Learning Disabilities. Successful interventions must use graphic organizers to either display concept relationships or provide an outline/overview of the text. Students’ reading comprehension was measured by the students’ ability to answer questions about the passage. Research conclusions stated that using graphic organizers was associated with improved reading comprehension overall for students with LD.

DiCecco and Gleason (2002) examined the effects of using graphic organizers with students with LD to convey and cue relational knowledge. A longer intervention and written essays were used to assess the students’ attainment of relational knowledge. Content was selected from the students’ expository text books and graphic organizers were developed based upon the text structure of the expository passages. Teachers began the lessons by introducing signal words, identifying text structure, and giving students a graphic organizer for each pattern. This study concluded that students who used graphic organizers had greater recall of relational knowledge and were able to generate more relational knowledge statements than students who did not use graphic organizers.

Over the course of the intervention, the students were introduced and taught how to use five different graphic organizers. The repeated, explicit teaching of the use of graphic organizers had a positive influence on each student’s ability to complete them independently. Each time a
passage was read or discussed, the students demonstrated growth in their ability to use the graphic organizer as a discussion aid and to add new details to it. In the first two weeks of intervention, the four students were able to complete the graphic organizer with explicit instruction and modeling from the teacher. During the second two weeks of the intervention, the teacher explicitly instructed and modeled the graphic organizer for the students, but the students were then released to complete the graphic organizers through discussion and look backs on their own. The final week of intervention proved that after explicit instruction and modeling of the final graphic organizer type, students were able to successfully complete the graphic organizer on their own. The QRI-IV pretest and posttest results demonstrate the increase in students’ recall and comprehension of text. The four students either showed growth, or showed no gain or loss, in answering explicit and implicit questions after reading. Students either moved from “instructional” to “independent” or from “frustration” to “instructional” or from “frustration” to “independent” on the QRI-IV comprehension measure. The research Kim et al (2004) and DiCecco and Gleason (2002) conducted supports the intervention planned for the four students. The students had exposure to and were explicitly taught how to use a graphic organizer to aid recall and comprehension of text. The students demonstrated an understanding of all graphic organizer types at the conclusion of the intervention which supports both research studies.

**Written Responses**

Williams et al. (2009) conducted a research study that investigated if explicit instruction in the use of graphic organizers and text structure would greatly increase students’ comprehension of expository text in written responses. With the help of compare-contrast questions from their teacher, the students then organized and wrote sentences generated from their graphic organizers. The students used their graphic organizers to write summaries of the
text. Students were given a paragraph frame to help them summarize. The researchers found this approach to writing was very systematic and was helpful in teaching and modeling how to write a well-structured comparative statement. The researchers found that listening and reading comprehension, combined with an integration of higher level comprehension instruction, is suitable at this grade level (Williams et al., 2009).

The writing portion of the current study was based on Williams et al. (2009) study. Through teacher and student questioning, student discussion, and the use of paragraph frames, the four students used their graphic organizers to complete topic sentences and summaries of the text. This was successful for the students in the 2009 study by Williams et al., and proved to be successful for the four students. Following the intervention, the students were more successful and willing to collaborate with others and to write with a specific purpose in mind. Students wrote in their monthly journals and wrote in response to narrative and expository texts. They wrote willingly and with attention to capitalization, punctuation, and sentence structure. Their writing was more detailed and organized. The students’ ability to successfully generate topic sentences improved greatly, but writing summaries continued to be difficult.

**Strengths and Limitations**

Several strengths of this study contributed to the gains the four students were able to make throughout the intervention. The daily intervention lesson was designed to be structured in a way which encouraged the four students to feel successful and understand the intervention process. They were able to understand each element of the lesson, contribute to it, and know what was coming next. After one week, the four students were able to anticipate what was coming next. The directions become less explicit as the intervention progressed.
Another contributing factor to the success of the intervention was the relationship between the students and the researcher. The researcher was each student’s classroom teacher and had a close relationship with each student’s family. The relationship between the researcher and students was comfortable and full of trust. The students were used to the researcher’s method of teaching and explicit modeling with gradual release to the student. This positive student-teacher relationship was a strength that added to the success of the intervention.

Another important factor of this study that contributed to the gains of the four students was the time of day that the intervention took place. The students were available at the very beginning of each day with the exception of one day a week. This created an optimal time for learning for the four students because they were rested and ready to learn.

The fact that the study was conducted with a small group of students is positive because the results can be generalized to a broader population. The intervention results could be successful with an entire class. The whole group lessons completed during the intervention benefited the entire class. The entire class became more knowledgeable in their understanding of expository text and the corresponding text structures. Though each student was not formally assessed, it was evident that gains in comprehension were made. Through informal observations, assessments, and analysis of student work, students showed gains in comprehension from text structure instruction.

The background knowledge and prior experiences of the four students contributed to the gains in this study. The students’ ability to make connections to the text based on their prior knowledge created a deeper level of comprehension. Their high levels of vocabulary also contributed to increases in their comprehension. Students had greater levels of background knowledge about dinosaurs, lion cubs, and lion prides.
Limitations of the study must be noted. First, the high level of student background knowledge about the expository text topics must be taken into consideration not only as strengths for this study, but also as limitations. Students had greater levels of background knowledge and vocabulary when reading about dinosaurs, lion cubs, and lion prides. Their high motivation levels led to a greater understanding with the description and compare and contrast graphic organizers. Students had less background knowledge about the Milwaukee Art Museum, gardens, and heroic people, and this led to lack of understanding with the graphic organizers for sequencing, problem/solution, and cause/effect. Students’ lack of interest in a topic directly led to their lack of understanding in certain graphic organizers.

**Recommendations for Further Study and for Educators**

The results of this study provide guidance for further research on the effects of explicit in the use of graphic organizers and text features in students reading expository text that have high fluency but low comprehension rates. One question that needs to be addressed is what the effect of continual text structure lessons would be if the research continued throughout the school year with an entire classroom of students? Throughout the intervention the rest of the class also completed the lessons; however, they did not receive the small group instruction that the group of four students benefited from. The remaining children in the class were not given pre and posttests related to the research study, and as a result, their gains could not be determined in the outcomes of this study. Classroom and school assessments indicated that the remaining children in the researcher’s class made substantial gains throughout the school year in other lessons relating to comprehension of expository text.

A second question for further research is how instruction in written responses, specifically summary writing, would affect students’ ability to generate sentences from graphic
organizers. The outcomes of this research demonstrated that students were able to utilize their graphic organizers to generate summary statements, but further teaching of summary writing could have improved students’ ability to generate summaries more independently and with greater understanding. Another extension of research would be to include more direction in the area of oral language and how written response writing impacts the ability to summarize.

This study provides evidence that it would be beneficial for educators to include portions of this intervention in the daily routine of the classroom. It is recommended that teachers be well informed about different text structures for expository text, the signal words for each text structure, and the appropriate graphic organizer specific for each text structure. Teachers must provide intensive instruction as a context for using graphic organizers with students and focus on the graphic organizer as a facilitator of the passage content. Another important portion of the intervention that informs the practice of educators is the use of expository text in early elementary classrooms. Students first learn to read narrative structures and come in to school with a sense of what narrative structure is. Teachers must prepare students for the shift from reading narrative text to reading expository text for information.

**Conclusion**

The present research suggests that teaching text structure through the use of graphic organizers has the ability to improve the comprehension of students with high fluency but low comprehension rates. The four students demonstrated gains in all areas when pretest scores were compared to posttest scores. The students’ ability to identify signal words in expository text allowed the students to determine what kind of text structure the passage was; in addition, it determined what kind of graphic organizer should be used. Identifying the main points of the passage and the supporting details allowed the students to improve their comprehension skills.
Recording their findings on the graphic organizer allowed for retelling and summarizing through collaborative discussions. Student sharing of sentences generated from the use of the graphic organizers allowed for further opportunities to review the passage and increase understanding of what was read. The gains that the four students experienced during the intervention are a direct result of the explicit teaching and structured intervention lesson used in this research study. The results of this study suggest that an explicit intervention containing the use of expository text, teaching of text features, the use of graphic organizers, and written responses can be a successful intervention for four first grade students with high fluency but low comprehension rates.
References


RAND Reading Study Group. (2002). Reading for understanding: Toward an R&D program in reading comprehension. Santa Monica, CA: RAND.


Concept Definition Map

What is it?

What is it like?

Category

Property

Property

Property

Property

Main Concept

What are some examples?

Illustration

Illustration

Illustration

New Definition
Name:  
Title:  

Story Train

What happened first?  What happened next?  What happened last?

Beginning  Middle  End

Description:

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http://teacher.scholastic.com
Compare/Contrast

Different

Same

Different
Cause and Effect

Cause

Effect

Cause

Effect
Problem & Solution Diagram

Name:
Book Title:

Problem

Goal

Event #1

Event # 2

Event #3

Resolution

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