ABSTRACT

Title of Dissertation: EXPLICIT INSTRUCTION ON RHETORICAL
PATTERNS AND STUDENT-CONSTRUCTED
GRAPHIC ORGANIZERS: THE IMPACT ON SIXTH-
GRADE STUDENTS' COMPREHENSION OF SOCIAL
STUDIES TEXT

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Using a pretest, posttest two group design, this study investigated the effect of

explicit instruction on rhetorical patterns and using those patterns to represent the content

graphically on sixth-grade students' ability to comprehend social studies text. Students in

13 classes from four middle schools in Pennsylvania received either explicit instruction in

identifying rhetorical patterns found in social studies textbooks and representing that text

graphically or routine social studies instruction. Routine social studies instruction was

identified as the instructional activities documented during observations conducted six

weeks prior to the intervention. When the intervention began, intervention group students

learned to identify rhetorical patterns, construct graphic organizers using the rhetorical

patterns, and write summaries of textbook content. Comparison group students continued

with routine social studies instruction. All students were assessed with (a) pre- and

posttests in which they constructed graphic organizers and wrote summaries using social

studies passages and (b) comprehension quizzes during on-going instruction. Randomly

selected students from each group engaged in think-aloud tasks at the end of the study.

The pre- and posttests results indicated a statistically significant interaction

between time and group for both graphic organizer construction (with a very large effect

size) and summary writing (with a moderate effect size). Intervention group students outperformed students in the routine social studies group in both constructing graphic organizers based on rhetorical patterns and writing complete summaries. For the comprehension quizzes, students receiving routine social studies instruction outperformed students in the intervention group when answering multiple-choice and essay questions requiring recall of content. Think-aloud responses demonstrated that students in the intervention group were able to graphically represent social studies textbook content using rhetorical patterns as well as transfer that knowledge to a textbook from a different domain while students in the comparison group recognized there was a structure to the content of the text but did not accurately represent that content graphically according to the appropriate rhetorical pattern. Observational data showed intervention students were more engaged with graphic organizers and work samples demonstrated they were able to identify key information in the text and represent it in graphic form.

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DEDICATION

This work is dedicated to my husband,

Richard Scott.

His love, patience, and encouragement made this journey possible.

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STATEMENT OF THE PROBLEM

Introduction

In many secondary classrooms, teachers use textbooks as the source of content they want their students to learn. Students may be asked to use the text when reading passages, answering questions, defining vocabulary or studying for tests. Unfortunately, reading textbooks can present immense challenges for students. Textbooks contain large amounts of information that may be new to students and the lengthy passages found in textbooks can be overwhelming.

Adding to this challenge for students is that textbooks consist of expository text. In elementary school, students typically read stories or narrative text more frequently than expository text and, as a result, are more comfortable reading narrative than expository text (Gersten, Fuchs, Williams, & Baker, 2001). They understand the elements found in narrative text and the typical sequence of how those elements are used. However, as students move into the middle school grades, they are expected to read more expository text and, frequently the expository text they are reading is found in textbooks.

When students read new content in a textbook, they encounter content with which they most likely are not familiar or have little background to support their understanding. Also, students may not be familiar with how information in textbooks is organized. When content and organization are both new to a reader, the student may find comprehension of that text challenging (Carrell, 1987). However, when students learn how the content is organized their comprehension may be enhanced.

Research has shown that when students have knowledge of how narrative text is organized that knowledge facilitates their comprehension (Dole & Brown, 1996; Idol, 1987; Reutzel, 1986). Research has also shown that students' comprehension improves when they receive instruction on how expository text is organized (Dymock, 2005; Meyer & Poon, 2001; Newman, 2007; Russell, 2005; Taylor, 1980). For example, the third- and ninth-grade students in Newman's (2007) and Russell's (2005) studies showed improved comprehension of expository text after instruction in text structure that involved learning to identify rhetorical patterns in texts (described below in the *Using Rhetorical Patterns to Identify Text Structure* section) and using those patterns to construct their own graphic organizers. However, the students in Newman's and Russell's studies were reading expository text found in trade books rather than textbooks. Furthermore, the instruction was conducted in small groups rather than with an entire classroom of students. Their studies involved third- and ninth-grade students, respectively, rather than sixth-grade students. Having just entered middle school, sixth-grade students begin a transition from general studies to domain-focused study where teachers use textbooks more intensively. Therefore, sixth-grade students may be at a strategic point in their education where they may particularly benefit from rhetorical pattern instruction that facilitates their ability to navigate and comprehend textbook content.

My study focused on helping middle school students in social studies classes comprehend the expository text found in their textbooks by providing instruction on how the content in such text are structured. Specifically, the purpose of this study was to examine the effect of providing sixth-grade students with explicit instruction in

identifying rhetorical patterns and using those patterns to represent the content

graphically on their ability to comprehend social studies text.

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

Problems with Textbooks

Textbooks frequently are the source of facts and information students are

expected to learn in particular domains (Issitt, 2004). In classrooms across the country,

75-90% of the material covered and activities completed come from textbooks

(Chambliss & Calfee, 1998; Jones, 2001). Textbooks today are visually appealing

including photographs, diagrams, maps, sidebars, and activities in addition to containing

large amounts of information (Budiansky, 2001; Jones, 2001).

Yet students may have difficulty reading the text as well as determining what

information on which to focus. Textbooks in the United States tend to mention vast

numbers of topics with little description or explanation making principles and main ideas

difficult to recognize (Budiansky, 2001). Ravitch (2004), who reviewed high school

history textbooks, stated that in the publishers' effort to include as many facts, dates, and

events as possible, there is no space left to examine the importance of an event or why an

event should be remembered.

After interviewing bilingual students about using the Nuffield Co-ordinated

Sciences biology textbook, Kearsey and Turner (1999) identified four features of

textbooks that caused students difficulty when attempting to read and understand them.

First, students were intimidated by authors' use of an authoritarian tone in their writing.

Second, students found the change from common language used in an anecdote to

scientific language confusing. Third, students were confused about the way ideas within a

section were organized. Finally, students found it difficult to comprehend ordinary words used in a scientific context. Even though these difficulties were noted by bilingual students, students with English as their first language may have similar problems when reading textbooks.

According to Project 2061, a group facilitating educational reform as part of the American Association for the Advancement of Science, research indicating how students will best understand new content is not reflected in textbook development (Jones, 2001). Additionally, assumptions made about the prior knowledge students bring to the textbook are not always accurate (Kearsey & Turner, 1999). The fact that many textbooks are written by consultants and not authors may also contribute to the formation of text that is not very comprehensible for students. (Chambliss & Calfee, 1998). Consequently, students may be faced with reading large amounts of text that may not be well written, be presented in the best way for learning, or build on their background. These difficulties within the textbook combined with a student's lack of familiarity both with the content and the organization used to present it can make comprehension of textbook material challenging.

Teachers may need to provide additional information for students to successfully navigate textbooks. For many teachers this information might include providing background information, defining vocabulary words, and/or making predictions based on previewing the text. Such an approach focuses on giving students content information that may facilitate their comprehension of the textbook. A "genre-centered approach" (Swales, 1990, p. 82) to understanding textbooks, however, could potentially assist student comprehension by teaching students to recognize the author's purpose and the

tools the author used to accomplish that purpose. In the next section, I define genre and explain how students who understand generic elements of a text may be better able to comprehend the content found there than students who do not understand these elements.

Genre

Bakhtin (1986) described language as taking form in utterances which occur in every realm of human activity. These utterances can be both oral and written; a single word or an entire composition. The theme, composition, and style of the utterance are linked to the situation or activity in which it occurs. While the utterance itself is completely individual, within a certain domain or discipline there are "relatively stable types" of utterances (Bakhtin, 1986, p. 60). These utterances are called speech genres.

Swales (1990) described these utterances as communicative events which have a specific purpose. The purpose for the communication provides an overall rationale for the genre and that rationale puts limitations on what is considered acceptable form and content for that genre. While examples of what is considered acceptable within a certain genre may vary, there is a similarity in form, structure, and style that is recognized and acknowledged by members of the community for whom the communication is intended. This group of people regularly communicating using accepted forms and structures are called a discourse community. Those that are part of the discourse community recognize and understand these types and forms of communication. Genre, therefore, refers to "relatively stable types" (Bakhtin, 1986, p. 60) of utterances with form, structure, and style that result from repeated interaction in both oral and written forms by the discourse community in order to accomplish the purposes of that group (Swales, 1990).

Textbooks are a type of communicative event or genre. The form, structure, and style may vary somewhat between textbooks but generally textbooks consist of chapters with lengthy passages addressing topics related to the domain. The textbook usually begins with an in depth table of contents and may have a glossary and an index at the end. The passages in textbooks often use similar structural patterns to present the content in the text.

Teachers may spend time familiarizing their students with the more obvious features of textbooks such as table of contents, chapter layouts, or glossaries. It is less likely, however, that they provide instruction that helps students understand the text as a genre. One important element in understanding the textbook as a genre is knowing how ideas may be structured or organized. The organizational structure of a text provides a kind of map to help students navigate the ideas and concepts contained there (Swales, 1990). By helping students understand how the content in textbooks may be organized, teachers can potentially make new content more accessible because students will only have to deal with new ideas rather than both new ideas and unfamiliar structures.

As Swales contended (1990), genre is a communicative event between author and reader. The author has a purpose for communicating with the reader and uses rhetorical tools to accomplish his/her purpose. One of the tools used by an author is specific structures to organize their message. Chambliss and Calfee (1998) have identified specific organizational structures or rhetorical patterns as tools authors use to accomplish their purpose. Authors of textbooks may use these rhetorical patterns to organize the content they wish to communicate. I contend that providing students with instruction in rhetorical patterns has the potential to facilitate students' comprehension of

the lengthy passages in textbooks they are asked to read. In the next section, I explain

Chambliss and Calfee's model of identifying text structure using rhetorical patterns.

Using Rhetorical Patterns to Identify Text Organization

Chambliss and Calfee's approach to identifying text structure is based on genre

or the idea that text is written for a purpose and the purpose creates a connection between

the author and the reader (Chambliss & Calfee, 1998; Swales, 1990). There are common

features found in texts of a specific genre that are understood by those who communicate

using that genre. Some of those common features are based in rhetoric. Many think of

rhetoric as the exaggeration, flowery language, and/or hyperbole that can be used in

persuasive writing or speaking. Rhetoric also refers to the tools and strategies authors use

when writing text. These tools involve word choice and usage as well as the arrangement

of ideas.

By analyzing freshman composition books, Chambliss and Calfee found that

writers, in addition to having a functional structure that alerts the reader to the overall

structure of text, also need to structure the content to effectively communicate the

purpose of the text (Calfee & Chambliss, 1987; 1998). According to Chambliss and

Calfee (1998), authors write to inform, argue, and/or explain. Based on these three

purposes, they identified a group of patterns or structures consistently presented in

composition books that writers of expository text use to arrange ideas, concepts, and

information. Chambliss and Calfee call these identifiable structures rhetorical patterns.

One advantage of using a rhetorically-based approach to identifying text structure

is that the reader is examining the text with the author's purpose in mind. By analyzing

the author's purpose and identifying the rhetorical pattern he/she uses, the reader is part

of the communicative event between the author and the reader which may facilitate

understanding of the author's message. A second advantage of using a rhetorically-based

approach to identifying text structure is that, rather than being based on content, the

rhetorical patterns are a generic rhetorical tool used by authors to structure text and

therefore, may be applied to other expository texts as well.

A third advantage of the rhetorically-based approach to identifying text structure

is that Chambliss and Calfee (1998) illustrated the rhetorical patterns in graphic form.

Students who learn the rhetorical patterns found in expository text can also display how

content in the text is organized in graphic organizer form. In the next section, I examine

the potential of using graphic organizers in conjunction with rhetorical patterns as a

means to facilitate student comprehension of textbooks.

Graphic Organizers and Text Organization

Graphic organizers are spatial displays of key ideas from textbooks or domain

content arranged to communicate conceptual hierarchy as well as relationships and

connections between ideas, facts, and concepts (Dunston, 1992; Kim, Vaughn, Wanzek,

& Wei, 2004; Moore & Readence, 1984). Graphic organizers can be used to present

information found linearly in textbooks and display it in two-dimensional form. In

graphic organizers, key ideas and supporting details are identified and can be clustered or

"chunked" to facilitate recall in units rather than as facts in isolation.

The concept of presenting content in a visual format has been appealing to

educators. The appeal stems from the idea that main ideas and concepts arranged

graphically to show relationship to each other should facilitate student comprehension of

content. The Learning-Focused Schools Model, (Thompson & Thompson, 2005)

developed to improve instructional practices in schools with low socioeconomic and high minority populations, states that graphic organizers are an integral teaching strategy that should be used to facilitate acquisition of new content.

While graphic organizers are an educational tool that appears to have great promise, research examining graphic organizers has produced inconsistent results. One possible reason for the inconsistency is the many variables considered in the research. For example, the development of graphic organizers began with the advanced organizer which involved presenting content to students prior to reading in order to build connections between the new content and the students' prior knowledge (Ausubel, 1960).

When Moore and Readence (1984) reviewed graphic organizer research however, they found that studies using graphic displays of content after reading text had a higher effect size than those used prior to reading. This statistic taken alone might indicate that graphic organizers used after reading are more effective than those used prior to reading. However, in addition to this treatment time variable, Moore and Readance, contended that the way graphic organizers are used must be taken into account when studying their effectiveness. In the studies reviewed by Moore and Readence, graphic organizers were used in many different ways including students looking at teacher-created graphic organizers, students filling in words or phrases on graphic organizers, or students grouping words on cards. Each of these activities could potentially produce a variation in results. Other variables examined in graphic organizer research are the use of graphic organizers with readers of varying abilities and degrees of prior knowledge (DiCecco & Gleason, 2002; Horton, Lovitt, & Bergerud, 1990; Lambiotte & Dansereau, 1992), the effect of instruction in summarizing combined with use of graphic organizers or

knowledge maps (Rewey, Dansereau, & Peel, 1991), expert-generated versus student-generated graphic organizers (McCagg & Dansereau, 1991), and comparing the effectiveness of outlining with graphic organizers (Bean, Singer, Sorter, & Frazee, 1986; Robinson & Kiewra, 1995).

When one considers the broad range of issues examined in graphic organizer research, it is not surprising that such research has produced varying results. While much of the research on graphic organizers has provided valuable information on how they can be used effectively, ongoing research should focus on specific variables and extend and refine what has been learned so far.

One issue that has been examined in research but needs ongoing exploration is relating text structure and graphic organizers in order to facilitate student comprehension and understanding of expository text. Researchers reviewing and critiquing graphic organizer research have addressed this issue. Griffin and Tulbert (1995) recommended that graphic organizer formats need to fit the organization of a text. Dunston (1992), after identifying many of the variables listed above, contended that students may need explicit instruction to understand how graphic organizers are related to the structure of a text. In making recommendations for future research using graphic organizers, Robinson (1998) stressed the importance of using multiple graphic organizers for chapters of a textbook because of the way structures vary within longer pieces of text. Each of these reviewers recognized that text structure is an important factor to consider when using graphic organizers to represent expository text.

Berkowitz (1986) examined the use of graphic organizers when she compared the effects of students creating graphic organizers, studying a expert-created map, answering

questions, or rereading and rehearsing the textbook material on learning social studies content. Students creating graphic organizers were taught to put the title of the passage in the middle of a paper, add four to six related main ideas around the title, and write two to four details for each main idea. They then learned how to study the map. The map study group was given an expert-created map, discussed the content and its arrangement, and was shown how to study the map. Students in the question and answer group, after reading the passage, answered 20 questions and studied the questions by reading and rehearsing. Students in the rereading group read the passage twice, were instructed to recall as much as possible, and then skim the text for information they may have missed.

Berkowitz (1986) found that students in the map construction group recalled significantly more main ideas than the map study, question/answer, or rereading groups. Berkowitz suggested that constructing the maps rather than just studying the maps required higher levels of processing thus improving recall of main ideas. Her study implies that student involvement in the construction process may facilitate student learning.

Interestingly, the map construction group performed better than the other three groups on only the second of the three passages. Berkowitz suggested that the structure or organization of the text may have impacted the map construction group since passage two "had an explicitly presented hierarchical structure which may have been easier for students to use in their construction of maps …" (p. 176). For all three passages, the students in the map construction group were instructed to write the topic surrounded by main ideas with related details using what Chambliss and Calfee called a topical net (1998). The comprehension and learning of students in the map construction group,

however, may have been negatively affected for passages one and three because the content may not have readily fit a topical net pattern which is only one of the rhetorical patterns an author might use to structure their writing. If the text did not use a topical net pattern, this mismatch of structures would have complicated graphic organizer construction and consequently, student learning. If this is the case, such an outcome indicates the importance of students receiving instruction in the various ways text can be organized in order to navigate expository text and construct graphic organizers that effectively represent how the content is structured.

Research Using Rhetorical Patterns and Graphic Organizers

In two recent dissertation studies, teachers or researchers provided direct instruction in multiple rhetorical patterns and graphic organizer construction to facilitate comprehension of expository text. Russell (2005), as part of a small group intervention for struggling adolescent readers, provided explicit instruction in rhetorical patterns so students could create graphic organizers to represent the content of the text. She hypothesized that students receiving instruction in rhetorical patterns would use that knowledge to aid comprehension and be better able to use those patterns to navigate texts than students who had not received explicit instruction in rhetorical patterns. The data Russell gathered from retellings, classroom-based assessments, and written summaries indicated that students who received instruction in rhetorical patterns were better able to retell text, respond to questions about text organization, and write summaries than those who had not received this instruction.

In the second dissertation study, Newman (2007) trained teachers to provide third-grade students with explicit instruction in rhetorical patterns and construction of graphic

organizers using those patterns. During the time allotted for guided reading in the language arts block, small groups in three classes received the rhetorical pattern/graphic organizer instruction while the control class continued with regular guided reading instruction. Newman found that students in the intervention groups showed gains in their ability to represent expository text in graphic organizer form and write summaries while the control group did not make gains.

The results of the studies by Russell (2005) and Newman (2007) provide strong evidence that students who received explicit instruction in rhetorical patterns and constructed graphic organizers based on the rhetorical patterns had better comprehension of expository text than students who did not receive this instruction. Both studies, however, used expository text in trade book form. Students in middle and high school classrooms are frequently asked to read expository text found in textbooks. Also, the interventions in both studies were carried out in small groups. As students progress through middle and high school, much of their content area instruction occurs in a regular classroom environment. Additionally, in Newman and Russell's study, students in third- and ninth-grade, respectively, received the rhetorical pattern/graphic organizer instruction. I suggest that sixth-grade students may be at a critical place developmentally to learn and use the rhetorical patterns effectively. The potential impact of student development on understanding text structure is supported by Chambliss and Murphy who found that fifth-grade students outperformed fourth-grade students in using an argument structure when reading social studies text and speculated this trend would have continued had sixth-grade students been included in the study (Chambliss & Murphy, 2002). Also, because these students are beginning secondary education, they will have the opportunity

to develop and apply the rhetorical pattern/graphic organizer strategy as they transition to domain-focused classes where textbooks are often an integral part of instruction.

Purpose and Significance

The purpose of this study was to examine the effect of explicit instruction in rhetorical patterns using student-constructed graphic organizers based on those patterns on sixth-grade students' ability to navigate and comprehend the content in social studies textbooks.

Given the results from graphic organizer research as well as research examining the impact of learning rhetorical patterns, sixth-grade students who learn rhetorical patterns used in expository text and construct graphic organizers based on rhetorical patterns, may more readily understand the textbook genre which could potentially impact their learning in two ways. First, students who learn rhetorical patterns and construct graphic organizers based on rhetorical patterns may improve their ability to comprehend the content in textbooks. Second, because rhetorical patterns are used to organize ideas and are not based on specific content, students may potentially be able to transfer this rhetorical pattern/graphic organizer tool to textbooks of other domains such as science or history.

I have not located any research that has examined the effect of explicit instruction in rhetorical patterns combined with displaying content in student-constructed graphic organizers based on rhetorical patterns on student understanding and learning of content from social studies text. In this study, I sought to extend and build on graphic organizer research by examining the impact of explicit instruction in rhetorical patterns and constructing graphic organizers using rhetorical patterns on sixth-grade students'

ability to comprehend social studies textbook content. Additionally, my study extended research by Russell (2005) and Newman (2007) by conducting an intervention with textbooks rather than trade books, in whole classrooms rather than in small groups, and with sixth-grade students rather than third- and ninth-grade students.

The Research Study

In this study, 13 classes of sixth-grade students from four middle schools in central Pennsylvania were assigned to intervention or comparison groups. Prior to implementing the intervention, the four participating teachers were observed during social studies classes to document routine instructional practices. Following these observations, the two teachers who taught the intervention were trained in the rhetorical pattern/graphic organizer intervention and then began instruction. The two comparison group teachers continued with routine social studies instruction.

The teachers in the intervention groups began by briefly introducing five rhetorical patterns that were found in the chapters from the social studies text that would be the focus of instruction for the study. The social studies textbook, *Harcourt Horizons World Regions* (Berson, 2003), has chapters that are divided into lessons which in turn are divided into subsections by topic. During the study, students studied the content of chapters five and seven in the textbook. Students learned the rhetorical patterns, formed graphic organizers, and wrote summaries for 13 subsections in those two chapters. The teacher used three class periods for each subsection of text. During the first period, the teacher introduced the topic in a particular subsection and students read the text. For the next two periods, the teacher provided instruction on the rhetorical pattern, graphic organizer construction, and writing a summary. The instruction across the 13 subsections

went through three phases: Phase 1-explicit instruction/ modeling/co-construction, Phase 2-peer construction, Phase 3-independent construction. As the students proceeded through these phases, there was a gradual release of responsibility from the teacher to the students to facilitate independent application of the rhetorical pattern/graphic organizer strategy (Pearson & Gallagher, 1983).

The teachers in the comparison groups began by teaching vocabulary for the next chapter by using a student-activated vocabulary activity during the two periods the intervention groups were being introduced to the rhetorical patterns. The teachers then proceeded to teach each text subsection on the three-period schedule. Like the intervention groups, the first period consisted of introducing the topic and students reading the text. The next two periods, however, consisted of routine instructional activities such as completing worksheets, filling in study guides, and answering questions.

Four data collection measures were used to analyze the effectiveness of the rhetorical pattern/graphic organizer intervention in comparison to the routine instructional practices in the comparison groups. First, prior to intervention instruction students in both intervention and comparison groups were given a subsection from the text. Students read the text, constructed a graphic organizer to reflect the content from the text, and wrote a summary. Second, after the intervention instruction was completed, students in both intervention and comparison groups completed a posttest on another subsection from the text following the same format as the pretest. Third, during the second chapter of instruction, students took three comprehension quizzes. The comprehension quizzes were chosen as a measure because they reflected the type of

assessments typically given in a social studies classroom. The quizzes consisted of multiple-choice questions and an essay question. Finally, a random sampling of students from both the intervention and comparison groups completed two think-aloud tasks. The students were asked to construct graphic organizers from two different textbooks passages; one from the social studies textbook and one from the sixth-grade health textbook. The purpose of the think-aloud measure was to examine the thinking processes used to construct graphic organizers and look for evidence of transfer of the rhetorical pattern/graphic organizer process to a textbook other than the social studies text used during the intervention instruction.

For data analysis, the graphic organizers and written summaries were scored using two rubrics. Using analysis of variance, the data was analyzed to determine if any differences were evident between the intervention and comparison groups from the pretest to the posttest. The data from the comprehension quizzes was analyzed to determine if instruction resulted in any differences between comparison and intervention groups in answering fact-oriented multiple-choice and essay questions. Finally, the responses from the think-aloud tasks were analyzed for patterns in thinking processes and evidence of transferring knowledge of the rhetorical pattern/graphic organizer strategy to another text.

Research Questions

The following research questions were addressed in this study:

1) How effective is explicit instruction in rhetorical patterns using student-constructed graphic organizers in comparison to routine social studies instruction in developing comprehension of social studies textbook content with sixth-grade students?

a) How effective is explicit instruction in rhetorical patterns using student-constructed graphic organizers in comparison to routine social studies instruction in developing comprehension of social studies textbook content with sixth-grade students as measured by graphic organizer production?

b) How effective is explicit instruction in rhetorical patterns using student-constructed graphic organizers in comparison to routine social studies instruction in developing comprehension of social studies textbook content with sixth-grade students as measured by written summaries?

c) How effective is explicit instruction in rhetorical patterns using student-constructed graphic organizers in comparison to routine social studies instruction in developing comprehension of social studies textbook content with sixth-grade students as measured by comprehension quizzes?

2) How do students in the rhetorical patterns/graphic organizer group and the routine social studies instruction group respond in think-aloud tasks with social studies and health texts?

Definitions

The following definitions reflect how these terms will be used in this study.

Cooperative learning refers to small groups or teams of students working together to help one another learn academic material or complete a task without being directly supervised by the teacher (Cohen, 1994; Slavin, 1991).

Explicit instruction involves the teacher providing clear and direct information about the content, tactic, strategy, or process they want students to learn (Graves, 2004).

Genre refers to "relatively stable types" (Bakhtin, 1986, p. 60) of utterances with form, structure, and style that result from repeated interaction in both oral and written forms by the discourse community in order to accomplish the purposes of that group (Swales, 1990).

Gradual release of responsibility is a term that refers to reducing the amount of support by the teacher as the student subsequently takes on more control of a task (Pearson & Gallagher, 1983). Dole, Duffy, Roehler, and Pearson (1991) explain that the role of the teacher is to give explicit instruction so students can complete work appropriately and then "providing gradually diminished assistance as students move closer and closer to independent use of the intended curricular outcomes" (p. 255)

Graphic organizers are spatial displays of key ideas from textbooks or domain content arranged to communicate conceptual hierarchy as well as relationships and connections between ideas, facts, and concepts (Dunston, 1992; Kim, Vaughn, Wanzek, & Wei, 2004; Moore & Readence, 1984). Graphic organizers can be formed using geometric shapes, lines, arrows, and links as well as incorporate other tools such as color and print size. *Expert-constructed graphic organizers* are visual displays of content material created by teachers or researchers. *Student-constructed graphic organizers* are graphic organizers students construct reflecting textbook content based on rhetorical patterns in the text.

Model is an "individual whose behaviors, verbalizations, and expressions are attended to by the observer and serve as cues for subsequent modeling" (Schunk, 1987, p. 149). *Modeling* takes place when the observer uses model information to change behaviors and actions.

Rhetorical patterns refer to identifiable forms by which authors arrange ideas, concepts, or information when writing lengthy expository text (Chambliss & Calfee, 1998). The next set of terms refers to specific rhetorical patterns:

Descriptive text refers to expository text written to provide a mental picture or give the characteristics or attributes of a place, object, or idea (Chambliss & Calfee, 1998)

List rhetorical pattern is a descriptive structure referring to a loosely connected set of facts in expository text (Chambliss & Calfee, 1998).

Topical net rhetorical pattern is a descriptive structure referring to a central topic surrounded by a related set of topics and details (Chambliss & Calfee, 1998).

Hierarchy rhetorical pattern is a set of ideas that are presented in levels with ideas of greatest importance being at the top and the ideas of least importance being at the lowest level (Chambliss & Calfee, 1998).

Matrix rhetorical pattern is a descriptive structure that compares entities such as objects, countries, persons, groups of people, or ideas using specific attributes (Chambliss & Calfee, 1998).

Sequential text refers to expository text written to present events linked by time. (Chambliss & Calfee, 1998).

Linear string rhetorical pattern is a sequential structure that presents events linked by time (Chambliss & Calfee, 1998).

Falling dominoes rhetorical pattern is a series of events where one event causes the next event (Chambliss & Calfee, 1998).

Branching tree rhetorical pattern is a sequential structure that presents a number of linear strings that occur simultaneously (Chambliss & Calfee, 1998).

Scaffolded instruction refers to support provided to a learner that enables them to complete a task that he/she would not have been able to accomplish on their own. The amount and kind of support is determined by the needs of the learner and is gradually reduced as he/she gains proficiency (Borkowski, 1992).

Textbooks refers to books that are " used as a standard work for the study of a particular subject" that reflect established domain theories and concepts, social values, principles and standards of writing, publishing demands, and changes in media technology (Issitt, 2004; Simpson, 2000).

Text structure refers to the way information is arranged in a text (Chambliss & Calfee, 1998).

Summary is an identification of the central ideas in a text which, with longer texts, may require discriminating between more and less important details (Trabasso & Bouchard, 2002).

Transfer is applying knowledge or skills in a context different than the one in which the skill or knowledge was originally learned (Bransford, Brown, & Cocking, 2000). Recent descriptions of transfer acknowledge the influence of the prior knowledge of the learner as well as other contextual factors (Barnett & Ceci, 2002; Lobato, 2006).

Summary

In many secondary classrooms, the majority of content students are expected to learn comes from textbooks (Issitt, 2004; Jones, 2001). Depending on reading proficiency

and experience reading expository text, students can be confused and overwhelmed by the length and complexity of the expository text passages found in textbooks (Kearsey & Turner, 1999). Two factors may impact a student's ability to comprehend textbook passages: new content and unfamiliar organization. When reading the text, students may be attempting to understand information with which they lack familiarity or background. Students may also lack understanding of the structure information may take in expository text. When students are unfamiliar with both the content and the structure a text, they may find it difficult to comprehend the material found there (Carrell, 1987). However, students' comprehension of expository text may be facilitated if they are taught the rhetorical patterns that are often used to organize ideas in expository text. Using graphic organizers to represent the rhetorical patterns and visually displaying the information from the text has the potential to assist students in seeing how text is organized and enhance comprehension of the text.

This study was built on two theoretical strands. First, students who understand the text as a genre or communicative event between the author and the reader where they are learning the author's purpose and the rhetorical patterns the author used to accomplish that purpose may be better able to comprehend and recall text than those who do not understand these generic elements (Newman, 2007; Russell, 2005). Second, graphic organizers reflecting rhetorical patterns can help students visualize how content is organized which has the potential to facilitate comprehension of text. Also, researchers have recommended that the role of text organization in constructing graphic organizers be examined in graphic organizer research (Dunston, 1992; Griffin & Tulbert, 1995; Robinson, 1998).

In this study, I sought to evaluate the effectiveness of an instructional intervention where students examined rhetorical patterns and learned to construct graphic organizers that reflected content from the social studies textbook. The potential benefits of this intervention are that students, by learning rhetorical patterns, may understand how text may be structured which can support them in their attempt to understand the content in the text they are reading. A second benefit is that, because rhetorical patterns are not based on specific content, students may be able to identify the same patterns in other textbooks and perhaps facilitate their comprehension of the content in those texts as well. In chapter 2, I provide research background on how the rhetorical pattern/graphic organizer intervention could facilitate students' comprehension when reading textbooks.

CHAPTER TWO

REVIEW OF LITERATURE

Overview

As students enter middle school, they typically read more expository text than they read in elementary school. Specifically, students are often asked to read and study passages in textbooks (Issitt, 2004). As stated in chapter 1, textbooks can provide challenges even to proficient readers. Textbooks contain complicated content, technical vocabulary, and detailed descriptions in lengthy passages. Students may find it difficult to distinguish key information from interesting details. Even if teachers attempt to provide adequate background to facilitate comprehension of the concepts, students may struggle to read and comprehend textbook content.

If, however, teachers take time to help students understand the textbook as a genre, students may be able recognize rhetorical patterns which authors use to organize the content about which they are writing. By identifying rhetorical patterns, students have knowledge that may assist them in recognizing and understanding the key concepts and related details in the text (Chambliss & Calfee, 1998). When these patterns are used to display information in graphic organizer form, students may be able to see the relationship and connections between concepts and ideas which can also enhance comprehension. The purpose of this study was to examine the effect of providing students with explicit instruction in identifying rhetorical patterns and using those patterns to represent the content graphically on sixth-grade students' ability to comprehend social studies text.

In this review of literature, I begin by reviewing research that demonstrates that knowledge of how text is organized can have a positive impact on comprehension of expository text. In this study, I used Chambliss and Calfee's (1998) rhetorical pattern approach for text organization analysis. I review Chambliss and Calfee's approach and provide a rationale for using their approach for this study. I review research on graphic organizers and focus on using student-constructed graphic organizers as an instructional tool to represent the structure of content found in expository text. In the last two sections, I describe the instructional framework for the study as well as issues related to transferring rhetorical pattern-based student-constructed graphic organizers to other texts.

<div align="center">Text Structure and Comprehension</div>

As stated in chapter 1, text structure refers to the way information is arranged in a text. Research has shown that student knowledge of text structure can facilitate comprehension of expository text (Hare, Rabinowitz, & Schieble, 1989; Meyer & Poon, 2001; Slater, Graves, & Piche, 1985).In this section, I review research examining the impact of text structure knowledge on comprehension and recall. My goal is to clearly establish that research supports the theory that understanding how text is structured can facilitate students' comprehension of expository text such as that found in textbooks.

Research on the Relationship of Text Structure and Comprehension

I review six studies that examine how text structure knowledge can affect comprehension. I chose the first four studies because they examined issues such as how knowledge of and training in text structure impacted comprehension of expository text (Meyer, Brandt, & Bluth, 1980a; Meyer & Poon, 2001; Slater, Graves, & Piche, 1985; Taylor, 1980). Also, the studies included participants ranging in age from fourth-grade to

adult. The final two studies in this section by Russell (2005) and Newman (2007) examined how teaching students to identify rhetorical patterns may impact their comprehension of expository text.

I begin by reviewing a study conducted by Taylor (1980) who examined how well readers of various ages and abilities could recall expository text and their awareness of text structures. The participants were 51 sixth-grade good and poor readers, fourth-grade good readers, and 17 adults.

Taylor (1980) constructed two 225-word passages on animal protection. One passage was for the good sixth-grade and adult readers and the second passage was for the poor sixth-grade and good fourth-grade readers. The content in the passages was identical except that synonyms were used to replace more difficult words in order to adjust readability to an appropriate level for the less-able readers. The ideas in each passage were hierarchically organized with general or superordinate ideas and specific details or subordinate ideas. Taylor also identified the structure as general statements followed by specific description; one of four top level structures identified by Meyer (1975).

Each participant read the passage appropriate for their reading level and completed a retelling. A second retelling was completed two days later to see how much the participant could recall after a delay.

An analysis of variance between the groups and across time and types of idea units indicated a significant main effect for group and time. On the immediate recall the adults recalled more than the sixth-grade good and poor readers and they, in turn, recalled more than the fourth-grade good readers. On the delayed recall, adults recalled more than

sixth-grade good readers who recalled more than poor sixth- and fourth-grade readers. An analysis of the elementary students showed no difference in use of text structure between the three groups for the immediate recall. However, for the delayed recall more sixth-grade good readers organized their response according to the text structure than did sixth-grade poor readers and the fourth-grade good readers. In analyzing just the sixth-grade responses to the delayed recalls, Taylor (1980) found that the both the sixth-grade good and poor readers who did use the text structure to organize their responses recalled more than the sixth-grade good and poor readers who did not use the text structure to organize their response.

The results from this research demonstrate that use of text organization may facilitate recall of facts particularly after a delay. It also provides evidence that developmental level may play a role in awareness and use of text organization. Unfortunately, the text was not authentic and was only 225 words which does not necessarily reflect the length of textbook passages sixth-grade students might be expected to read.

The second study in this section again demonstrates the impact that text structure knowledge can have on recalling expository text. Slater, Graves, and Piche´ (1985) examined whether the performance of ninth-grade students on recall and multiple choice tasks would vary depending on the type of pre-reading treatment they received. The pre-reading treatments consisted of two experimental conditions: a reading passage with a structural organizer with an outline grid and a reading passage with a structural organizer without an outline grid. The directions in the two experimental conditions discussed how understanding the structure of the text could assist students with recall and that they

should use the organization of the text to assist them when completing the recall task. The control conditions consisted of a reading passage with or without note taking. Students were given packets containing the reading passages, pre- and post-multiple choice tests, and directions which varied depending upon the condition. The directions for the recall protocol instructed students to write down everything they could remember from the passage.

Students that received the structural organizer with the outline grid recalled significantly more idea units on the recall protocol than those without the outline grid and those in the control conditions. On the multiple choice tests, those that received the structural organizer and outline grid outscored two of the three other conditions. Interestingly, the condition that outperformed the structural organizer/outline grid group was the note taking group. Slater et al. (1985) suggested that note taking requires active engagement with the text which the structural organizer alone and simply reading the passages did not demand. This study by Slater et al. demonstrated that student focus on the text organization facilitated recall of idea units from the passages.

In the next study, Meyer, Brandt, and Bluth (1980) worked with ninth-grade students identified as good, poor, or underachieving readers. Students identified as underachieving had standardized vocabulary scores similar to the good readers but comprehension scores similar to poor readers.

Two passages were developed with clearly identifiable top-level structures. Top-level structures refer to Meyers prose analysis system which identifies five patterns of text: problem/solution, comparison, antecedent/consequent, description, and collection.

Meyer et al. (1980) hypothesized that good readers would use a structure strategy using the top-level structure to assist in recalling the text while poor readers would use a default/list strategy; meaning they would simply try to remember what was in the text. Meyer et al. wanted to know if signal words would facilitate the underachieving readers to use the top-level structure in written retellings and recall of information.

Students read versions of the passages to which they had been randomly assigned and were asked to write down all they could recall. The recall task was repeated one week later. The recall protocols were scored for the number of idea units, the identification of the central ideas, and evidence of the top-level structure.

Meyer et al. (1980) found that good readers did use the top-level structure to organize their recalls while poor readers made lists of facts. Those students who did use the top-level structure of the passages recalled significantly more main ideas, major and minor details at both testing times than those who did not. In this study, less than 50% of students used the top-level structure at least once on the recall tasks and only 22% used it all four times.

The results from this study indicate a connection between the use of top-level structures and comprehension and a correlation between use of top-level structures and amount of information recalled from a text. It also supports the findings from Taylor's (1980) research demonstrating how knowledge of text structure can facilitate recall of text following a delay.

In another study, Meyer and Poon (2001) examined the effect of structure strategy training on the recall, memory of key ideas, and use of top-level structure on 56 young and 65 older adults. Meyer and Poon also evaluated whether words that signal the

presence of a particular text structure would affect the use of top-level structure in recalls of text. Participants were evaluated and categorized as very low, low, average, high, or very high in reading and were assigned to training or control groups using a stratified random assignment procedure. Two control groups consisted of an interest-list strategy group or no-training group.

The strategy training group learned to identify text structures and then use that structure to organize a recall of the text. The interest-list group learned to evaluate their interest in articles and practiced remembering what they read. Each participant completed four recalls and five summaries. Each script or text was scored using Meyer's prose analysis system (1975) for total recall, recall of gist, and top-level structure.

Meyer and Poon (2001) found a significant main effect for the training condition on total recall, with the structure strategy group recalling significantly more information from the text than those in the interest-list group or the no-training group. There was also a significant main effect, for training on identifying the gist or main ideas in the text with the structure strategy group recalling more important ideas than those in the control groups. Finally, a significant main effect was found for the training condition on using the top-level structure to organize text recalls demonstrating that the training received by the structure strategy group impacted how their recalls were organized. Meyer and Poon found that few participants consistently used the text structure to organize recalls across all five passages on the posttest. However, while none of the training groups showed consistent use of the top-level structure in the pretest, 47% of the structure strategy group used the top-level structure consistently in the five passages while only 23 % and 12 % of the interest-list group and no-training group, respectively, used the top-level structure

consistently in five passages. Interestingly, the presence of signals increased the consistent use of top-level structure in all three groups.

Participants then completed recalls on two transfer tasks. For the first task, participants watched a video on nutrition and, for the second task, had to make a final treatment decision about breast cancer after reading advice from seven doctors and a summary of research. The structure strategy group recalled more idea units from the video than the other training groups and 65% of the structure strategy group used the problem/solution structure to organize their responses while only 10% of the interest-list group used the top-level structure. After they wrote their decision for the decision making task, the participants were to write everything they could remember from what they had read. While only 24% of the interest-list group used either a comparison or problem/solution structure to organize their recall, 77% of the structure strategy group used one of these organizational structures.

The next two studies I review in this section examined the impact of explicit instruction in text organization using the same rhetorical pattern approach as was targeted in this dissertation. In her study, Russell (2005) taught struggling ninth-grade adolescents readers to identify rhetorical patterns as part of an intervention to increase literacy skills. Russell hypothesized that readers who received instruction in rhetorical patterns would be able to navigate the text and use the rhetorical patterns as an aid to comprehension more successfully than those who did not receive this instruction. For the pretest, Russell had students complete retellings and summaries and then randomly assigned students to treatment or control groups using matched pairs.

Russell then divided the students in the intervention group into two groups. One group received rhetorical pattern instruction for the first nine weeks of the intervention and engaged in journaling for the second nine weeks of the intervention. The second group engaged in journaling for the first nine weeks of the intervention and received rhetorical pattern instruction for the second nine weeks of intervention. Students receiving rhetorical pattern instruction during the first nine weeks were able to respond to questions involving the rhetorical patterns during the second nine weeks after the instruction was completed, while students engaged in journaling during the first nine weeks responded inconsistently. Students who began instruction in rhetorical patterns during weeks 10 and 11 were able to more accurately respond to questions involving the organization of the text. Similar results were found with the written summaries. Students receiving rhetorical pattern instruction first continued to apply that knowledge to summaries after they began journaling while the group that journaled first and began rhetorical pattern instruction during the second nine weeks began to apply that knowledge just a week after they began instruction. In Russell's study, students were able to use explicit instruction in rhetorical patterns to develop graphic organizers which in turn positively impacted retelling and summary responses as well as answers on curriculum-based assessments.

In the second study, Newman (2007) trained teachers to teach third-grade students how to identify rhetorical patterns and create graphic organizers using those patterns to represent the content of expository texts. During the time allotted for guided reading in the language arts block, small groups in three classes received the rhetorical

pattern/graphic organizer instruction while the control class continued with regular guided reading instruction.

Teachers in the intervention classrooms engaged in modeling and think-aloud as part of instruction. Initially, the graphic organizers and summaries were co-constructed by the teachers and students. Students then worked in pairs to construct graphic organizers and summaries before constructing graphic organizers and writing the summaries individually.

Students in the intervention and control groups completed a pretest and two posttest measures. A rubric was used to score graphic organizers and summaries from these assessments. Results indicated that students in the intervention groups showed gains in their ability to represent expository text in graphic organizer form while the control group did not make gains. Similar results were obtained when analyzing student summaries of expository text. Students receiving instruction in rhetorical patterns and constructing graphic organizers made significantly greater gains than the control group when writing summaries of expository text. Additionally, significant correlations were found between the graphic organizers and summaries for all students in both posttests indicating that the graphic organizers played an important role in the construction of the summaries.

The studies by Russell (2005)and Newman (2007) demonstrated students' comprehension of expository text was facilitated by instruction on rhetorical patterns. Students who received the rhetorical pattern instruction were better able to construct graphic organizers and complete accurate written summaries than those who had not received this instruction.

The six studies reviewed here provide important insights regarding text structure. First, knowledge of text structure appears to facilitate comprehension of expository text. The students in the Slater et al. study (1985) recalled more content from passages when prompted to think about the structure than those who were not prompted with text structure information. In Newman's (2007) and Russell's (2005) studies, the third- and ninth-grade students, respectively, who learned to identify rhetorical patterns in expository text, both showed greater gains in writing summaries than student who did not receive this instruction. Interestingly, in Taylor's (1980) study both the good and poor sixth-grade readers who used the text structure recalled more than the good and poor sixth-grade readers who did not use the text structure. Second, explicit instruction in text structures appeared to play an important role in helping readers to recall text. Meyer and Poon (2001) found that adults trained in text structures not only applied text structure knowledge when recalling content from texts presented during instruction but applied that knowledge to two transfer tasks asking them to recall information from a video and research literature. After receiving explicit instruction in rhetorical patterns, the students in Russell's and Newman's studies were able to identify rhetorical patterns in expository text and use that text structure knowledge to write summaries of text. Poor readers, such as those in Taylor's research, may need explicit instruction to use text structure to facilitate comprehension and recall of text; something that good readers in Meyer et al.'s (1980) research appeared to be able to do without specific direction. Third, the use of text structure knowledge appeared to be impacted by developmental levels. The adults in Taylor's research recalled more than the sixth-grade good and poor readers and they, in turn, recalled more than the fourth-grade students. Finally, summarization is a tool

frequently used to document recall of content and use of text structure to organize the recall response. Slater et al., Meyer et al., Meyer and Poon, Russell, and Newman used a summary recall format to document content recall as well as application of text structure as an organizational tool. The use of summaries by these researchers supports the use of summaries in the present study.

Summary

In this section I reviewed six studies that demonstrated how knowledge of text structure facilitated student and adult comprehension and recall of expository text. Taylor (1980) and Meyer, Brandt and Bluth (1980) showed that good readers use text structure to facilitate recall more than poor readers. Meyer and Poon (2001), Newman (2007), and Russell (2005) showed that students who received direct instruction in text structure either recalled or wrote better summaries than students who did not receive this instruction.

While the results of these studies showed how knowledge of text structure can positively impact comprehension, in my research students learned to identify how text was organized using Chambliss and Calfee's approach for identifying text organization. In the next section, I describe Chambliss and Calfee's approach for identifying text organization and provide a rationale for using the framework.

Chambliss and Calfee's Rhetorical Pattern Approach

In this section I describe Chambliss and Calfee's approach using rhetorical patterns for text organization analysis. I conclude by giving a rationale for using the Chambliss and Calfee rhetorical pattern approach for this research study.

Description of Rhetorical Pattern Approach to Text Structure Analysis

Chambliss and Calfee's (1987; 1998) view of text organization is built on a study of genre. In educational circles, genre is often viewed as a means of classifying text; most frequently literary texts. Chambliss and Calfee base their understanding of genre on Swales who defines genre in social terms as communication between the author and the reader (Swales, 1990).

As stated in chapter 1, genre refers to "relatively stable types" (Bakhtin, 1986, p. 60) of utterances with form, structure, and style that result from repeated interaction in both oral and written forms by the discourse community in order to accomplish the purposes of that group (Swales, 1990). The author's purpose is connected to the way he/she arranges or structures the information he/she wishes to communicate. The tools of rhetoric in writing include generic ways to structure or arrange information that will assist authors in accomplishing their purpose/s and communicating that purpose to the reader. Within a genre, such as a textbook, the author may use these structural tools which Chambliss and Calfee have called rhetorical patterns (1998).

To identify a rhetorical pattern, the reader first has to identify the author's purpose. According to Chambliss and Calfee (1998), the purpose of expository texts is to inform, argue and/or explain. Text written to inform includes description and sequence. An author with a descriptive purpose points out the attributes, characteristics, and nature of an object. Chambliss and Calfee identified four rhetorical patterns that are used for the purpose of description: list, topical net, hierarchy, and matrix. A list is a loosely connected set of facts. A topical net is a structure where a central idea is connected to a related but equally important set of topics and details. A hierarchy is a set of ideas that

are presented in levels with ideas of greatest importance being at the top and the ideas of

least importance being at the lowest level. A matrix compares entities such as objects,

countries, persons, or groups of people using specific attributes.

When sequence is part of the information, the element of time is prominent as an

event or events are presented (Chambliss & Calfee, 1998). The rhetorical patterns used to

show sequence are a linear string, falling dominoes, and branching tree. A linear string is

a sequential structure that describes events using the element of time. Falling dominoes is

a series of events where one event causes the next event. A branching tree displays two

sequences of events that occurred simultaneously.

A text written to argue uses any rhetorical pattern as evidence for ensuing

warrants or claims (Toulmin, 1958). An explanation uses content structured to describe or

using sequence in a logical order to facilitate the understanding of an idea or concept.

Chambliss and Calfee (1998) have shown that when a reader identifies the

author's purpose they can then determine the rhetorical pattern the author may have used.

In Chambliss' study (1995), twelfth grade students recognized evidence and claims

(Toulmin, 1958) and wrote summaries of lengthy text that used the argument structure.

This study provides evidence that the reader's understanding of text may be facilitated

by identifying the author's purpose and the rhetorical pattern used to organize the

information the author wishes to communicate.

Rationale for Using Rhetorical Pattern Approach

There are important reasons for using Chambliss and Calfee's (1998) approach to

identify text organization. First, Chambliss and Calfee's approach is built on connecting

the reader to the purpose of the author. Such an emphasis should facilitate comprehension

because the reader is not a passive recipient of information but potentially an active participant in a communicative event. Second, their approach focuses on analyzing the rhetorical tools authors use rather than the specific content about which they write. The rhetorical patterns that authors use to organize their ideas may be found in many types of expository text. Students can potentially apply their knowledge of rhetorical patterns to other expository texts.

Third, the Chambliss and Calfee approach lends itself to analyzing text organization in large pieces of text (Calfee & Chambliss, 1987). Text varying in length from a few hundred words to entire chapters or books can be analyzed using this approach. Fourth, in order to display the structure using other approaches, texts must be reviewed sentence by sentence which for longer texts may be very cumbersome (Kintsch & Van Dijk, 1978; Meyer & Rice, 1984). In Chambliss and Calfee's approach such an analysis is not necessary because rhetorical patterns are based on the overall purpose of the text and how the content is structured to achieve that purpose. Fifth, the rhetorical patterns are represented graphically (Chambliss & Calfee, 1998) (See Appendix A). Chambliss and Calfee's graphic representation of the rhetorical patterns illustrates relationships between ideas in the text. The graphic organizers representing the rhetorical patterns not only assist the reader navigating the ideas in the text but allow the reader to see how those ideas are related to one another as well.

Summary

In this section, I described Chambliss and Calfee's (1998) approach to text organization analysis where the reader identifies a rhetorical pattern the author used to accomplish their purpose when writing the text. I then identified reasons for using

Chambliss and Calfee approach for this study, such as identifying the author's purpose, the ability to apply rhetorical patterns to other expository texts, and the ability to apply rhetorical patterns to lengthy expository passages,.

Another reason I used Chambliss and Calfee's (1998) rhetorical pattern approach for this study is because they developed graphic organizers for each of the rhetorical patterns. As I stated in chapter 1, graphic organizers are a tool teachers and students can use to display text organization in visual form. In the next section, I describe a theoretical foundation for student-constructed graphic organizers and review research to establish a rationale for using graphic organizers as a means to help sixth-grade students navigate and comprehend social studies text.

<div align="center">Student-Constructed Graphic Organizers</div>

As stated, graphic organizers are spatial displays of key ideas from textbooks or domain content arranged to communicate conceptual hierarchy as well as relationships and connections between ideas, facts, and concepts (Dunston, 1992; Kim, Vaughn, Wanzek, & Wei, 2004; Moore & Readence, 1984). For the purposes of this study, student-constructed graphic organizers are graphic organizers students construct reflecting textbook content based on rhetorical patterns in the text. The active process of constructing graphic organizers has the potential to promote comprehension as students read expository text.

Generative Processes of Comprehension Theory

Wittrock (1989) contended that reading is as generative a process as writing. When writing, an author is creating meaning that is put on a page. According to Wittrock,

a reader generates meaning as they establish relationships between parts of the text and between the text and his/her background knowledge and experiences.

The generative process of comprehension model developed by Wittrock (1989; 1991; 1992) consists of four elements: motivation; attention; knowledge, perceptions, and preconceptions; and generation. For the purposes of this study, I focus on the generative element. Wittrock and Carter (1975) explained that "generative processing of information emphasizes active construction of semantic and distinctive associations…" (p. 490). Wittrock (1989) stated that successful comprehension occurs when a student invents or creates a model or explanation that enables new information and content to fit present knowledge structures. The process of actively generating relations is what promotes assimilation, fitting new information to presently existing schema, or accommodation, creation of new schema.

Many students' learning experiences involve being given information, memorizing and then recalling that information. According to Wittrock (1989), the relationships students identify in text should involve more than surface understanding of text and recall from short-term memory. The relations established through generative tasks should be those that a reader would not develop without intervention from the teacher or other students. Wittrock (1991) contended that "most students profit further from more explicit generative ... techniques that require them to build actively the applications, structures, interpretations, and relations to past experiences that comprise understanding" (p. 174). These activities might include generation of titles, headings, questions, summaries, graphs, tables, or main ideas.

The teacher, through explicit instruction, facilitates generative actions in the classroom (Wittrock, 1991). To establish relationships between concepts, the teacher explains, models, or demonstrates the use of specific generative activities and then in turn has students engage in them with respect to the content being learned. To facilitate connections between new content and prior knowledge and experience, the teacher would model, explain, or demonstrate metaphors, analogies, problem solving, paraphrasing, for example, and then have students engage in these processes as well. Wittrock recommended teaching text organization to students and displaying that organization as a way to facilitate understanding of relationships between concepts in text. The generation of graphic organizers to reflect text organization is a generative activity that, according to Wittrock's model, should facilitate comprehension.

I review two studies that demonstrate how generative processes appear to positively impact learning. I chose to review these studies because they specifically examine the effectiveness of the generative process of comprehension model and involve reading rather than other subject areas.

Doctorow, Wittrock, and Marks (1978) predicted that students given paragraph headings and instructions to generate sentences about paragraphs would have greater comprehension and recall than students who did not have the headings or generative instructions. The participants were 488 sixth-grade students from elementary schools in West Los Angeles, California. The students were divided into high- and low-ability reading groups based on Science Research Associates Reading (SRA) Placement Test scores.

Two stories from the SRA kits were adapted so the content would be appropriate for sixth grade but at a proper reading level. Students who were identified as high-ability readers read a story called *Conductor Moses* while students identified as low-ability readers read a story called *The Mirror*. Since each ability group read different passages, each one was considered a separate experiment.

Students were randomly assigned to one of eight treatment or control groups. In the one-word paragraph heading treatment (R_1), students were given a one-word retrieval cue at the beginning of each paragraph in the text. In the two-word retrieval treatment (R_2), students were given a two-word retrieval cue above each paragraph of the story. The first word in the paragraphs for the R_2 group was the same as that used in the paragraphs from the R_1 group. The cues in both these groups illuminated a key theme of the paragraph. In the generative treatment group (G), there was a blank space where a heading might be for a paragraph and students were directed to construct their own sentence about what happened in the paragraph. The GR_1 group combined the one-word heading with instructions to write a sentence using the one word from the heading in the sentence. The GR_2 group combined the two-word heading with instructions to write a sentence using the two words from the heading in the sentence. The control story treatments consisted of reading the story with no headings or instructions to construct sentences (C_s), simply reading the two-word headings with no story (C_h), or reading an unrelated story (C_u).

Students read the passages and then completed a multiple-choice test with four types of items. The Noncued Inferential Meaning items required the reader to make an inference based on comprehension of more than one sentence not directly related to the

paragraph headings. The Cued Inferential Meaning items required students to make an inference based on comprehension of more than one sentence directly related to the paragraph headings. The Noncued Sentence Meaning items required students to use one sentence that was not directly related to the paragraph headings. The Cued Sentence Meaning subtest required the use of one sentence that was directly related to the paragraph headings.

Students in each ability group were assigned to treatment or control groups and given the appropriate materials to read and directions to follow based on that assignment. The high-ability group had 20 minutes to read the 1,125 word passage and the low-ability group had eight minutes to read the 372 word passage. Both groups were given 15 minutes to complete the multiple-choice test. One week later both groups were given a Cloze recall task from the passage they had read.

Doctorow et al. (1978) predicted the following outcome for the various treatment and control groups on the comprehension test and subtests: $GR_2 > GR_1 > G > R_2 > R_1 > C_s > C_h > C_u$. The comparison tests were significant for the entire comprehension test for both high- and low-ability groups. This hypothesis was also supported for the individual subtests and the recall test as well for both high- and low-ability groups. The sentence generation treatment (G) significantly outperformed heading groups (R_1 and R_2) for low readers but not high readers. The students in the generative/paragraph heading treatments (GR_1 and GR_2) performed significantly better than students in the paragraph heading treatments (R_1 and R_2) on both the comprehension and recall tests. With both groups, generative processes positively influenced comprehension and recall but readers in the low ability group particularly benefited from

generating sentences. These results support the hypothesis that generative processes facilitate comprehension and recall.

Linden and Wittrock (1981) examined the effect of the generative model for reading comprehension by presenting it over a series of days in a regular classroom setting. Linden and Wittrock tested these hypotheses. First, children that are 10 years of age can increase their comprehension when they engage in generative activities as they read. Second, 10 year old children will have better comprehension when first making mental images and then engaging in verbal generative actions than engaging in generative actions and then making mental images. Third, Linden and Wittrock hypothesized that the number of generations relating to the text would correlate with increases in comprehension.

The participants in the study were 64 fifth-grade students randomly assigned to four treatment groups: Imaginal to Verbal Generations, Verbal to Imaginal Generations, No Instructions to Generate, Classroom Teacher Taught Control Group. The first three groups were taught by the first researcher in the study while the fourth group was taught by a regular classroom teacher.

The procedures for the treatment groups were as follows. On day one, students read one of three stories and took two tests; one test assessed factual information and one test assessed comprehension. On days two and three, the students read the other two stories and were given the same assessments as on day one.

The generative activities conducted during the instructional time on these days varied between treatment groups. On day one, the imaginal to verbal generations group read the text, were encouraged to make pictures in their minds, and then draw the pictures

they had imagined. On day two, after the students had read the story, they were asked to write a one or two sentence summary for each part of the story which had been divided into three sections. On day three, students repeated what was done on day one, except instead of drawing they generated analogies and metaphors relating the story to their own experiences. The verbal to imaginal treatment group followed the same set of activities as the imaginal to verbal but conducted the three days in reverse. The no instructions to generate treatment group read the same stories over the same number of days but engaged in typical reading activities such as identifying characters and main ideas and details and completing phonetic analysis. The purpose of this group was to provide a control group for the other two treatment groups that were also taught by the first researcher. The instruction for the fourth group was conducted by the classroom teacher who chose the skills that would be taught to that group.

The results supported the first hypothesis that engaging in generative activities facilitates comprehension. A comparison test indicated that the combined means of the two treatment groups was significantly higher than the scores of the two control groups on the comprehension tests. The hypothesis regarding the sequence of imaginal to verbal generative activities was not supported. The number of text-related generations was positively correlated to comprehension.

The fact that the students in the study were taught in groups of eight and the author of the study taught the first three treatment groups does reduce the generalizability of this study to a regular classroom setting. However, the results indicate that engaging in generative activities such as summarizing, labeling, and creating metaphors and analogies facilitates comprehension of stories. Both the Doctorow and Wittrock (1978) and Linden

and Wittrock (1981) studies provide evidence supporting the use of generative activities to support comprehension.

Wittrock (1989) suggested that teaching text organization and having students visually represent the content could facilitate comprehension by enabling students to identify relationships between parts of the text. Student-constructed graphic organizers as a generative activity may help students comprehend and learn the structure of social studies texts. In the next section I present research using graphic organizers to establish a rationale for their use with instruction in rhetorical patterns.

Rationale for Use of Graphic Organizers

Mayer (1984) contended that in order for textbook content to become meaningful students need to engage in three processes: selecting, organizing, and integrating. When selecting, students determine what information is needed to complete a task or reach a specified goal. When students organize information, they create a structure that identifies and reflects relationships between the selected ideas. Students integrate when they connect newly created information structures with prior knowledge and understanding. As a learning strategy, graphic organizers have the potential to help students select, organize, and integrate content. In the next section, research is reviewed that demonstrates how graphic organizers may facilitate textbook learning.

Focus on central ideas. As Mayer (1984) stated, meaningful learning involves selecting key or critical information. Graphic organizers highlight such information helping students to differentiate it from supporting details.

Guastello, Beasly, and Sinatra (2000) contended that the activity of creating a concept map helped students focus on the important information in the text they were

reading. In this study, 124 low-achieving seventh-grade students from a parochial school in Brooklyn, New York were randomly assigned to an experimental or control group. The experimental group began the unit on the circulatory system by activating prior knowledge, being introduced to the objectives of the unit and then constructing concept maps guided by the teacher as they read and discussed chapter content. The control group began with the same introductory lesson but then used a traditional instructional format of reading and discussion of chapter content using a K-W-L chart (Ogle, 1986) to record what they had learned. After eight days of instruction students completed a 20 item teacher-developed criterion reference test. Results of an analysis of covariance using the pretest as the covariate indicated there was a main effect for the experimental group.

The limited time for treatment and application of concept mapping to one unit of text does restrict broad application of the study but the authors contended the active engagement of constructing the concept map did help the students to identify main ideas in the text and the relationships between them which positively impacted their ability to understand and recall information.

Identification of relationships between ideas. The types of questions students respond to in content area tests are often recall or retelling requiring little analysis or synthesis of information. Using or constructing graphic organizers has the potential to help students not only identify facts but understand how they are related.

DiCecco and Gleason (2002) randomly assigned 12 learning disabled students (1 eighth-grade, 3 seventh-grade, 8 sixth-grade) to the graphic organizer treatment and 12 learning disabled students (2 eight-grade, 5 seventh-grade, 5 sixth-grade students) to the no-graphic organizer treatment. In addition to being given the Woodcock Reading

Mastery Test to analyze group differences, students were given a 20-item multiple choice pretest to assess knowledge of the social studies content from the text to be covered during the study and a writing test to assess writing ability and knowledge of relationships in the content. The writing test was scored by counting words and the number of relational statements. No significant differences were found between the groups.

Instruction took place over four weeks in special education classrooms and was provided by six special education teachers. The same instructional format was followed for both groups. Lessons began with an introduction of new vocabulary, reading the designated text, and discussing and responding to discussion questions to ensure students understood the key concepts in the text. During the next 20 minutes, teachers discussed the relationships contained in the content. For the graphic organizer group, these relationships were displayed on an overhead and portions of the graphic organizer were filled out by the students. For the no-graphic organizer group, teachers also discussed relationships in the content but these were not displayed visually. Students took notes and engaged in activities to reinforce basic concepts.

Students completed three assessment measures: pre- and posttest multiple-choice tests, eight fact knowledge quizzes, and two essays. The measures were given to assess recall of content knowledge and understanding of relationships between facts and ideas. The first two assessments were scored by correct responses and the domain knowledge essays were scored for number of words, number of relational statements by individual, and number of relational statements by condition.

Results from the pre- and post multiple-choice tests showed there were no significant differences in performance between the two conditions. There was also no significant difference in performance between conditions for the fact quizzes. On the domain knowledge essays students in the graphic organizer group had significantly more relational statements than students in the no-graphic organizer group.

By using more than recall assessment measures, this study demonstrated that using graphic organizers has the potential to help students understand and remember relationships between concepts more effectively than stating and recording them in notes. As Robinson (1998) noted, the advantage of graphic organizers is that they visually display the relationships between ideas and should be employed to help students learn these relationships. DiCecco and Gleason (2002) demonstrated that graphic organizers can be used successfully to help students understand the relationships between ideas in text.

Additionally, Lambiotte and Dansereau (1992) maintained that by using graphic organizers such as a concept map, students do not have to infer the relationships between the nodes or ideas; these connections are displayed on the map itself. As students analyze and synthesize content material in constructing graphic organizers, they can not only learn important factual content but see relationships between the ideas and concepts.

Efficient retrieval of information. Students with limited knowledge of study skills may spend time passively reading or rereading text to study for an exam (Gettinger & Seibert, 2002). Others may use study guides or outlines provided by the classroom teacher. Both textbooks and study guides are in linear format. Graphic organizers are

generally constructed so that main ideas can be identified as well as the details that are related to those main ideas.

Research has shown that students have difficulty searching for information in text (Dreher, 2002; Dreher & Guthrie, 1990). Robinson and Skinner (1996) hypothesized that retrieving information from a matrix, a form of graphic organizer, would be more efficient than retrieving information from outlines, and retrieving information from outlines more efficient than retrieving information from text. Robinson and Skinner distinguished between looking for one fact or a local search and looking for a group of facts that contribute to a concept or a global search. The global search requires more cognitive space as once an idea is found it must be remembered while other facts are located.

In the first part of Robinson and Skinner's study (1996), 43 undergraduate students read factual questions requiring a local search. Information to answer the questions was shown in one of three ways on a computer screen: text, outline, or matrix. The outline and matrix were constructed so they used the same information that was in the text. Students were to find the answer on the display, hit the space bar, and then mark their answer sheet. Robinson and Skinner found that the students who looked at text to find their response took longer than those looking at an outline or matrix. The response times for looking at the outline and matrix did not differ when completing a local search. Robinson and Skinner attributed the similar response times to the basic nature of finding one piece of information.

In the second part of Robinson and Skinner's study (1996), participants followed the same procedure as part one but answered questions that included two or more

concepts which would require a global search (e.g. Which whale swims in the smallest group?). Students took longer to respond to the question when looking at text rather than the outline or the matrix. In a result different from the first experiment, students who looked at the outline took more time to respond than those who looked at the matrix.

Concerned that the searches were impacted by the number of words in the displays and not how the content was organized, Robinson and Skinner (1996), developed displays that used the exact same words but were arranged in text, outline, or matrix form. The "sentences" in the text contained only the content words and were placed in linear form. The students engaged in a global search that required looking for trends or patterns in the information (e.g. As fish swim deeper, they tend to be ____ in color. A. darker   B. lighter). The results were the same as experiment two where students searching matrices responded faster than students searching outlines who in turn responded faster than students searching text.

O'Donnell (1993) found that students could search knowledge maps for facts more quickly than text and Winn, Li, and Schill (1991) found that tree diagrams enabled students to find information more quickly than text. The knowledge map appeared to be more effective for facilitating local rather than global searches while the tree diagram was effective for global searching. These studies indicated that graphic organizers may help students identify information more quickly than looking in text. The graphic organizer has the potential to help students identify important ideas from text and shows the relationship between those ideas which appears to facilitate retrieval. If students have had a part in constructing the graphic organizer, their familiarity with the content may increase recall as well.

Potentially benefits students of varying abilities. One of the variables that researchers have examined in graphic organizer research is the effect of using graphic organizers with students having a wide range of learning abilities. The following studies examined this variable.

Horton, Lovitt, and Bergerud (1990) investigated the effects of graphic organizer use in heterogeneously grouped classes containing learning disabled, remedial, and regular education students in secondary social studies, science, and health classes. In the first experiment, three middle school science classes, three middle school social studies classes, and three high school social studies classes participated. Two of the three classes were assigned to the two experimental groups, self-study or graphic organizer, and the remaining class was assigned to the neutral group.

In order to see what students could do without teacher intervention, students in the self-study group read and reread the text, studied the passage using their choice of study tactics such as outlining or identifying main ideas, followed written directions to complete the student version of the graphic organizer, and took the test. The teacher-directed graphic organizer group read and reread the passage, filled out the graphic organizer with teacher guidance, studied their graphic organizer, and took the test. Since the results were similar across subject areas the scores were pooled. Learning disabled students in the graphic organizer group averaged 73% correct while learning-disabled students in the self-study group averaged 30% correct on the tests. Remedial students in the teacher-directed graphic organizer group averaged 80% correct while the remedial students in the self-study group averaged 39%. Regular education science and social studies students in middle school and regular education social studies students in high

school who received the teacher-directed graphic organizer treatment scored an average of 26 percentage points higher than students who engaged in the self-study treatment.

The purpose of the second experiment was to see if similar results could be obtained when students independently completed the graphic organizers with direction on where to find information in the text. The second experiment was identical to the first except that students in the graphic organizer group were given a cover page for their graphic organizer indicating page number and paragraph to find the information needed for the graphic organizer. The teacher used a teacher version of the graphic organizer to review student work and allowed them to correct the graphic organizers they had completed independently. The results in experiment two were similar to that of experiment one with learning disabled, remedial, and regular education students completing the student-directed graphic organizer scoring significantly more correct answers than those in the self-study groups regardless of subject area. Learning disabled students completed 71% of the items correctly using the graphic organizer while learning disabled students in the self-study group only completed 19% correctly.

The purpose of the third experiment was to examine the effectiveness of student-directed graphic organizers with clues versus self-study. The participants were from middle school social studies and science classes and high school health classes. Again the experiment was identical to the first two experiments except that students in the graphic organizer condition were given a cover sheet with a list of sentences containing the ideas and concepts that should be used to fill in the diagram. Again, results indicated that learning disabled and regular education students engaging in student-directed graphic

organizers with clues scored significantly higher on the tests than students who engaged in self-study.

This study demonstrated that learning disabled, remedial, and regular education students were more successful on follow-up testing after completing graphic organizers than students who engaged in self-study. Interestingly, the ranges in tests scores between self-study groups and graphic organizer groups were smaller with regular education students than with learning disabled students (e.g. Experiment 3: middle school learning disability students using graphic organizers scored 67%, self-study scored 10%; middle school regular education students using graphic organizers scored an average of 77%, self-study scored 51%) indicating that the graphic organizer strategy may provide the necessary support that learning disabled students require to comprehend and recall content.

Bulgren, Lenz, Schumaker, Deshler, and Marquis (2002) also sought to examine the effectiveness of a concept comparison table graphic organizer in groups with diverse abilities: high achiever, normal achiever, low achiever, and learning disabled. The experimental group was taught targeted content using the concept comparison table while the control group was taught using a traditional lecture-discussion method. The testing included recall, complete set (assessing the ability to recall related sets of facts), and recognition questions. The results indicated that the learning disabled, lower achievers, and normal achievers in the experimental group all performed significantly better than the control group on at least one of the three measures. The high achievement experimental group, while not producing any significant differences from the control group, did best on the assessment requiring them to recall related sets of facts. Bulgren et al. noted that

small group sizes may have negated significant results and contended that using the graphic organizer technique may be most beneficial for higher-ability students when they have to respond to a task requiring higher-level thinking skills. The concept comparison table procedure generally showed greater effectiveness with learning disabled and low achieving students.

The trend of lower ability students gaining more from graphic organizer use is supported by Lambiotte and Dansereau (1992) who found that graphic organizers benefited students with low prior knowledge about a topic more so than students with high prior knowledge. Lambiotte and Dansereau recommended that student with higher prior knowledge construct their own graphic organizers as it will enable them to integrate personal ideas and thoughts about the topic.

These studies indicate that graphic organizers can have benefits for most students but the effect may be reduced for higher ability students. To gain the most from engaging in graphic organizers, higher achieving students may need to construct their own graphic organizers and be given assessments that require synthesis of information.

Although graphic organizer research is diverse in terms of participant characteristics and types of graphic organizers and assessment pieces used, instruction and student use of graphic organizers appear to have the potential to help students focus on main ideas, understand relationships between ideas, and retrieve information quickly. Students of varying abilities also seem to benefit from using graphic organizers.

I now examine research involving student-constructed graphic organizers. Students who construct graphic organizers may have greater opportunities to interact with

and demonstrate comprehension of content than students using expert-constructed graphic organizers.

Rationale for Student-Constructed Graphic Organizers

According to Wittrock's generative model of comprehension (1991), engaging in an activity such as creating a graphic organizer may facilitate student's comprehension of content in text. Research on student-constructed graphic organizers varies with regards to the proportion of the graphic organizer for which the student is responsible. In the Horton, Lovitt, and Bergerud study (1990) the experimental group was given a framework and filled in the information using ideas from the book or concepts presented on paper. McCagg and Dansereau (1991) had undergraduate students, after four weeks of training, produce knowledge maps with content material using nodes (central ideas), links (identifying the relationship), and link labeling. For the purposes of the proposed study, student-constructed graphic organizers are graphic organizers students develop reflecting textbook content based on rhetorical patterns in the text. In the next section, I provide a rationale for having students construct graphic organizers.

Student engagement. Simmons, Griffin, and Kameenui (1988) conducted a study with sixth-grade students using science content. There were three conditions in the study: advanced graphic organizer, post-graphic organizer, and traditional instruction. The advanced graphic organizer group was introduced to targeted content with the teacher presenting the graphic organizer and students filling in a blank version. Students then read the parts of the text that covered the content to which they had been introduced. The post-graphic organizer group read the same passage as the advanced graphic organizer group. They were then presented with a graphic organizer and filled it in. Students in the

traditional instruction group read the same passage as the other two groups but engaged in teacher-directed discussion about segments of the passage. They reviewed each day's content at the end of the class. Three measures of factual recall were given: short-term probes, immediate posttest, and delayed posttest.

There was no main effect for treatment in the short-term probe and the immediate posttest. On the delayed posttest, students who received the advanced graphic organizer treatment scored significantly better than those in the post-graphic organizer treatment.

Simmons et al. (1988) contended that factual recall assessments may not have measured the relational knowledge students gained from the graphic organizers. They also suggested that simply providing graphic organizers to students does not require them to interact with content. The interaction with content the students in the graphic organizer group had may not have been that much different than traditional instruction with the teacher identifying key facts and asking students to recall them in assessments.

Spiegel and Barufaldi (1994) conducted a study where community college students were taught to recognize text structure and construct a graphic post organizer and then compared their performance on 20 item multiple-choice pre- and posttests to students who read and studied the same passages. There was no significant difference responding to recall questions between students who were given or actively identified text structure and the control group. There was also no significant difference in performance between students who were given a graphic organizer reflecting the text structure of the targeted passage and the control group. There was, however, a significant difference in performance on recall between students who identified text structure and constructed a graphic post organizer based on that structure and the control group.

Spiegel and Barafaldi suggested it was the active engagement on the part of the students

identifying text structure and constructing graphic organizers that resulted in them being

able to recall text information. They contended that "the generative activity of

reorganizing linear text material into spatial form (post-reading graphic organizer) leads

to deeper processing of the text." (p. 924).

These studies demonstrate that graphic organizers may be more effective when

students are engaged in their construction. While there are many variables such as

reading ability, level of student involvement in construction, and assessment measures

that can impact the outcomes of such research, continued investigation is needed to

determine the impact graphic organizers constructed by students have on learning.

Demonstrate student knowledge and understanding of content. When a teacher or

expert creates a graphic organizer, the organizer will reflect the conceptual understanding

of that person with regards to the content being displayed. Student-constructed graphic

organizers have the potential to show the degree of understanding the student has of the

content.

Ruiz-Primo, Schultz, Li, and Shavelson (2001) believed that the method by which

students displayed their knowledge about content could actually impact the data

generated about that knowledge. They compared two concept mapping techniques; fill-

in-the-map and construct-a-map from scratch with 152 high school chemistry students.

Concept maps consist of nodes or concepts being linked with labels to identify the link

relationship. The fill-in-the-map technique required students to fill in blank nodes or

blank linking lines and was scored by how many nodes and links were correctly filled in.

With the construct-a-map from scratch technique, students were given the concepts and

then had to arrange them and describe the links. Students and teachers in the study were trained to construct maps as well as use the fill-in-the-map method.

Ruiz-Primo et al. (2001) generated three scores for student-created graphic organizers. The proposition accuracy score was the number of propositions made on the student's map. The convergence score was the proportion of accurate propositions made by the student out of the total number of propositions on a criterion map. The salience score was the proportion of accurate propositions out of all the propositions on the student's map.

The chemistry teachers and researchers identified concepts and links they felt students needed to know and created a criterion map. Two fill-in maps were developed; one leaving 60% of nodes blank and one leaving 31.5% of links blank. Two versions of the blank nodes map and two versions of the blank links map were developed.

Students went through four assessment sessions. In the first session, all students constructed a map. The students were given no concepts, links, or suggested structure for the map. In the second session, students completed one of the two maps with missing nodes. Students were given a list of concepts to select from in order to fill in the nodes. In the third session, students completed one of the two maps with missing links. Students were given a list of linking words to select from in order to fill in the missing links. In the fourth session, students completed the multiple-choice test.

An important finding by Ruiz-Primo et al. (2001) was that the means for filling in nodes was significantly higher than for filling in links indicating that these two map tasks were not equal. The student-constructed maps were given a proposition accuracy score, a convergence score, and a salience score. One interesting result was that 6.6% of the

students provided more than the 38 links found in the criterion map and, according to raters, some of those propositions were better than those on the criterion map. The mean proportion for the salience score was .73 indicating that most of the propositions on the maps were accurate. However, the convergence mean (.50), which Ruiz-Primo et al. found to be most accurate for assessing student-constructed maps, indicated that student knowledge of content was not as strong as the salience score might have indicated.

Given a .48 correlation between map techniques, Ruiz-Primo et al. (2001) determined that the fill-in-the-map and construct-a-map methods are not measuring the same skills. Further, they contended that the construct-a-map method showed, by the differences in scores, that students had varying levels of content knowledge and therefore was the better of the two techniques in indicating student understanding of content. The study by Ruiz-Primo et al. (2001) provides evidence that student-constructed graphic organizers have the potential to indicate student understanding of content more so than other graphic organizer tasks where students fill in information.

According to these studies, when students construct graphic organizers they are more likely to interact with content in a deeper way than when given an expert-created graphic organizer. Such interaction has the potential to promote recall of information as well as develop a better understanding of the content. Student-constructed graphic organizers also appear to provide a more realistic picture of student knowledge about targeted content than methods such as filling in maps with teacher direction or filling in maps with concept lists.

Summary

As stated, graphic organizers are spatial displays of key ideas from textbooks or domain content arranged to communicate conceptual hierarchy as well as relationships and connections between ideas, facts, and concepts (Dunston, 1992; Kim, Vaughn, Wanzek, & Wei, 2004; Moore & Readence, 1984). Graphic organizers can help students focus on main ideas, identify relationships between ideas, and facilitate efficient retrieval of information. They also appear to benefit students of varying abilities. Student-constructed graphic organizers require interaction with content and can be used to demonstrate whether students understand specific material. While some research has been done with student-constructed graphic organizers, more is needed in order to examine the effectiveness of this instructional tool when combined with instruction in rhetorical patterns in facilitating student comprehension of textbook content. In the next section, after establishing a theoretical foundation for instruction, I identify and provide research support for specific instructional approaches that were used to implement the intervention in this study.

Instructional Framework

The choice of instructional approaches used to teach rhetorical patterns and graphic organizer construction is critical if students are to have the opportunity to interact with content and learn to independently construct graphic organizers. In this section, I examine three instructional approaches that were employed in this study. First, however, I review the theoretical foundation for such practices.

Theoretical Foundation

Two foundational theories of learning that provide insight on this study are positivism and constructivism. Positivism is reflected in a traditional information transmission approach to instruction while constructivist theory emphasizes the learner as they actively engage in tasks that promote processing and analysis.

Impact of positivism. Positivism is a theoretical paradigm based on the premise that "the inquirer and the object [of inquiry] are independent" (Lincoln & Guba, 1985, p. 37). Knowledge is facts, concepts, generalizations, and ideas that are true no matter the time or context. This view of knowledge has precipitated instructional practices that have pervaded education for many years (O'Brien, Stewart, & Moje, 1995). The teacher is viewed as the holder of knowledge and as a result he/she is in control of the classroom (Campione, 1996; Wink & Putney, 2002). The job of the teacher is to transmit that knowledge to his/her students. The student plays a passive role in learning. The results of learning through a transmission model are that students are taught information but not how to strategically use it (Campione, 1996). The product-oriented tests students take may give a misguided view of a specific domain because students may understand that domain in light of the information they are asked to supply for a test.

Theories of constructivism and social-cultural constructivism. Constructivism is built on a number of key concepts. In constructivism, in contrast to a positivist view, action or participation is a critical component of learning (Phillips, 1995). It is through engagement with objects or other people that learners build on to, adjust, change, or add to knowledge structures. The focus of learning in constructivism is on the whole or conceptual learning rather than individual skills or facts (Fosnot, 1996). The learner

develops an understanding of relationships and holistic ideas that are brought to light through activity. As London (1990) said, "To know something is not merely to be told about it; it is to see it, modify it, to change it, to transform it, to act upon it." Rather than being passive receptors of knowledge, students who construct graphic organizers have the opportunity to interact and become involved with the content that is part of the domain they are studying. Also, as social-constructivist theories suggest, students can develop thinking and learning as they discuss graphic organizer construction with others.

Much of social-constructivist theory is attributed to the work of Vygotsky who believed that psychological development is built on social constructs (Hedegaard, 1996; Wertsch & Tulviste, 1992). Moll (2001) summarized Vygotsky's theories this way "Human thinking develops through the mediation of others." (p. 113) Scribner (1997) provided three characteristics of a social-cultural theory of learning. First, development is situated in activities with specific direction and purpose. Second, development occurs over time as culture influences situations and interactions. Third, mental functions and activity are mediated through both material objects and language.

The mediation to which Scribner (1997) refers is critical to Vygotsky's theories. Kozulin (1995) identified three mediators in the culture that facilitate intellectual growth: language, interrelations between people, and personal activity. Consequently, these factors become the means by which the development of human thinking is able to take place.

As mentioned, language plays an integral part in the developmental processes Vygotsky describes (Englert & Palincsar, 1991; Minick, 1996). Initially, the learner participates in activities with the teacher or other learners and engages in what is known

as social speech (Vygotsky, 1978). What once occurred outside the learner then begins to be incorporated by the individual or group in what Vygotsky called egocentric speech. The final level is called inner speech in which the learner continues to construct new and deeper conceptual ideas.

The development of inner speech occurs within one of the most well-known aspects of Vygotskian theory, the zone of proximal development (Belmont, 1989; Vygotsky, 1978; Wink & Putney, 2002). The zone of proximal development is the place between what a child can accomplish on his/her own and what he/she can do with a teacher or knowledgeable person. It is here where the language processes of social and egocentric speech and ultimately inner speech are used to facilitate higher mental functions (Englert & Palincsar, 1991). Moll (2001) proposed that Vygotsky may have seen the zone of proximal development as more than a representation of instruction but where meaning becomes the mediator both at a social level and mental level.

In this study, the instructional approach was based on elements of constructivist and social-constructivist theories. First, students were actively engaged in analyzing rhetorical patterns and constructing graphic organizers to represent content organized using those patterns. Student-constructed graphic organizers can potentially be a tool that promotes student involvement in learning new content. Second, teacher/student and student/student interaction provided a climate for discussions of rhetorical patterns and content. Third, the language students used to analyze and identify rhetorical patterns and construct graphic organizers had the potential to facilitate the development of the inner speech needed to generate new personal knowledge structures related to the content being

presented. In the next section, three instructional approaches that promote student engagement, social interaction, and the use of language are described.

Components of Instruction

The following instructional approaches were used in this intervention study. First, teachers engaged in explicit instruction to teach rhetorical patterns and graphic organizer construction (Bulgren & Scanlon, 1998; Protheroe, 2004; Simpson & Nist, 2000). Second, scaffolding was used to provide support to students as they developed proficiency in learning rhetorical patterns and constructing graphic organizers (Wood, Bruner, & Ross, 1976). Scaffolding occurs as teachers provide high levels of guidance and feedback when students are learning the strategy and, based on student progress and need for assistance, gradually reduce support to facilitate independence in application of the strategy. Third, cooperative or collaborative learning groups were used to promote student interaction when analyzing rhetorical patterns and constructing graphic organizers (Goldman, 1997; Simpson, 1984). I discuss each of these instructional approaches in detail in the next sections.

Explicit instruction. When teachers use direct instruction or explanation, they provide explicit information about the content or process they want students to learn (Graves, 2004). Direct instruction may be followed by modeling, teacher/student interaction with content, strategies or processes, and guided practice. Direct instruction on using tactics strategically would include how, why, and when the tactic is to be used (Duffy, 2002). Some theorists might believe that engaging in direct instruction precludes student construction of knowledge. Harris and Pressley (1991), however, contended that constructed knowledge is not counter to instructed knowledge. In fact, with regard to

strategy instruction, they suggested that teachers must design and establish learning situations where students can understand and develop understanding and use of targeted strategies. Those learning situations might include explicit instruction and modeling.

Duffy et al. (1986) examined whether fifth grade teachers trained to provide explicit strategy instruction would provide more explanations than those who were not trained and whether students in low reading groups exposed to this instruction would be more aware of the skill that was taught than those who did not receive explicit instruction. Student comprehension achievement on a standardized test was also measured. Results indicated that trained teachers used significantly more explanations than untrained teachers. Students receiving the instruction from trained teachers were significantly more aware of the skill that had been taught than those who were taught by untrained teachers. The study established a connection between increased teacher explanation and student awareness of the targeted skill or strategy. Duffy et al. conceded that expressing awareness of strategies did not confirm application. There was no difference in performance between treatment and control groups on the standardized comprehension measure. Duffy et al. suggested that the standardized test may measure aptitude more so than the impact of the intervention.

In a second study with third grade teachers and students, Duffy et al. (1987) examined whether teachers could be trained to explicitly explain the mental processes that are needed to strategically use basal reading skills. They also examined whether such explanations can help students in low reading groups be more aware of what they were taught and more strategic when reading. Finally, they assessed whether increased explicit

explanations would result in increased use of strategies and growth in reading achievement.

Results indicated that teachers trained in providing explicit explanations for strategic use of reading skills engaged in these explanations more than the control teachers. Responses to interview questions indicated that students exposed to explicit instruction were more aware of lesson content as a whole and specifically about the procedural and situational knowledge needed to apply strategies than those students who did not receive this instruction. In addition to the standardized test used previously (Duffy, et al., 1986), Duffy et al. (1987), gave students two additional tasks. The Supplemental Achievement Measure asked students to use a specific skill and respond to a question about their thinking processes while using that skill. The Graded Oral Reading Passage task required students to read a passage aloud and explain how they determined the meaning of two unknown words embedded in the passage. Students were asked to comment on self-corrections and the meanings of the unknown words. Interestingly, there was no difference between treatment groups and control groups on using isolated skills. There was, however, a significant difference in favor of the treatment group on the follow-up question about the thinking processes used to apply the skill. Students who received explicit explanations about reasoning were aware of how they applied the skill. This awareness translated into application on the Graded Oral Reading Passage where students had to apply skills in connected text. Student in the treatment group demonstrated they used reasoning in applying skills and were able to describe that reasoning. The results generated by Duffy et al. (1986; 1987) demonstrated how explicit

instruction facilitates awareness of how, when, and why students need to use a learning approach such as constructing a graphic organizer.

Based on the research presented, explicit instruction appeared to help students develop an understanding of targeted skills that are the goal of instruction. As a result, explicit instruction was a vital component of the rhetorical pattern/student-constructed graphic organizer intervention. Since the goal is for students to develop graphic organizers independently, however, the instructional format must embed explicit instruction in activities that will facilitate individual student competence. In the next section, I discuss scaffolding as a means of helping students gain independence in learning rhetorical patterns and constructing graphic organizers and potentially use this knowledge to study textbooks from other domains.

Scaffolding. The term scaffolding was used by Wood, Bruner, and Ross (1976) to describe the interaction between an adult tutor and a young child as they completed a problem solving task. Wood, Bruner, and Ross defined scaffolding as the "process that enables a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts" (p. 90).

A number of key characteristics identify the concept of instructional scaffolding. Scaffolding begins when the learner is engaged in the task by the adult (Stone, 1998; Wood, Bruner, & Ross, 1976). The support provided in scaffolding involves simplifying the task so the learner recognizes when they have attained a particular level of learning, providing models to help the student move beyond what they have already achieved, and pointing out specific features of the task to provide reference points (Wood, Bruner, & Ross, 1976). The support or direction may be in verbal or nonverbal form. Scaffolding

requires ongoing diagnosis of student understanding. As Wood, Bruner, and Ross explain, the tutor must have theories about how the problem can be solved as well as about the tutee's present understanding and task performance abilities. Support involves "providing tailored assistance" that fits student need and levels of understanding (Larkin, 2001, p. 31). Scaffolded support is gradually faded as the student gains proficiency; the ultimate goal is independent application of the learned skill or task (Beed & Hawkins, 1991; Graves, 2004; Lajoie, 2005).

Palinscar and Brown's (1984) study on reciprocal teaching provides an example of how scaffolded support is used to teach students to clarify, question, summarize, and predict when reading text. Initially, when using reciprocal teaching, the teacher frequently models the strategy for students and they in turn repeat or use the model as they are learning the strategy. Teacher models are developed based on student need. Gradually, students begin to model the strategies with the teacher providing support where needed. As students gain proficiency, they model or demonstrate use of strategies for other students. The goal is for students to internalize these strategies and use them independently.

The kind of scaffolding students receive should be related to their specific level of development. As Borkowski (1992) stated, "the ultimate goal of scaffolding provided to particular students is unique because the components of teacher-student interaction are not scripted but, rather develop as instruction unfolds" (p. 255). The term scaffolding as used by Wood, Bruner, and Ross (1976) was applied to a one-on-one learning scenario between a tutor and a tutee. However, whole classrooms are more complex and providing scaffolding in this setting is challenging (Davis & Miyake, 2004). Interactions between

teacher and students are impacted by factors such as teacher-student ratio, limited time periods, and success and/or failure being displayed publicly (Meyer & Turner, 2002). Meyer and Turner (2002) identified three kinds of responses that can be used to facilitate scaffolding in larger groups; engaging students in negotiating the meaning of important concepts, supporting student individual strategy use and independent application of information, and creating a supportive environment motivationally, emotionally, and corporately.

In my study, individual and group scaffolding were important components of instruction as students learned to construct graphic organizers to represent social studies textbook content according to the rhetorical patterns organizing the content. As teachers monitored student progress, they adjusted the amount of support needed to enable students to construct graphic organizers independently.

In the next section, I address the importance of student interaction in constructing graphic organizers according to the appropriate rhetorical pattern. Peers in small groups can provide assistance to one another as well as stimulate thinking processes as ideas are developed.

Cooperative/collaborative learning. Instruction in social studies often centers on a textbook. In many classes, teacher talk can be predominant while student engagement consists of completing assignments and responding on objective tests (Hendrix, 1999). Cooperative learning is an instructional tool that can promote student engagement with content they need to learn. Cooperative learning refers to small groups or teams of students working together to help one another learn academic material or complete a task without being directly supervised by the teacher (Cohen, 1994; Slavin, 1991). Working

cooperatively refers to engagement and coordinated efforts between two or more students (Slavin, 1983).

In two research reviews (Slavin, 1983, 1991), cooperative learning was found to have a positive effect on student achievement. According to Cohen (1994) using student achievement as a definition of productivity tends to emphasize factual learning and basic skills. Simply using cooperative learning as an instructional approach does not guarantee that students will be engaged in constructing knowledge (Vermette & Foote, 2001). In order for students to generate new understanding they must be able to take risks, look at information from different perspectives, and be involved in analyzing and organizing content.

Cohen (1994), in reviewing research on cooperative learning, proposed that research needed to look at features of small groups. Specifically, Cohen examined productivity in groups and how the type of interaction that occurs is often determined by the type of tasks given. Productivity, defined as student achievement, tends to focus on isolated skills and memorizing facts. Productivity can also be defined in terms of conceptual learning and developing higher level thinking skills. The productivity of students will depend on what kind of interaction occurs which will be determined by the type of task students are assigned. Tasks, such as math problems, with one right answer are really tasks that could be done individually. Group tasks, on the other hand, require resources that an individual alone would not possess thus requiring input from or interaction with others. Elaborations and explanations would be necessary in facilitating student learning. As a result, achievement or productivity is dependent on the interaction that occurs within the group. Based on research of cooperative learning, Cohen proposed

a number of ways to facilitate interdependence and interaction in cooperative groups. First, the group should turn in one report or product. A student who must complete individual work will ultimately focus on what he or she needs to accomplish. Second, the task should be structured to facilitate maximum interaction. In a task with too much structure, students do not have to think for themselves. In a task with too little structure, students often operate at the least demanding level possible. Third, teachers need to provide training for students so they can work cooperatively and give them opportunities to reflect on the functioning of their group.

Research has been conducted combining cooperative learning with graphic organizers. Van Drie and Van Boxtel (2003), in an attempt to bridge the gap from book knowledge to students conceptual understanding gave 15 and 16 year-old students a task where they had to develop a concept map on communism. Students were randomly assigned to work individually or in pairs. Results indicated that students who worked in pairs were better able to relate and describe the connections between the concepts on the map. Students working in pairs engaged in discussions and responded to questions. Van Drie and Van Boxtel contended that collaborating while constructing the concept maps encouraged verbalization, justification, and problem solving related to the concepts.

Darch, Carnine, and Kameenuii (1986) examined the performance of sixth-grade students who were taught using a graphic organizer on the first day of instruction in a unit. On the second and third days, the students in the graphic organizer group treatment played a game with four to six other students using the graphic organizer. Students had to monitor the game and give feedback on student responses. Students in the graphic organizer individual treatment were given a series of steps to rehearse the information on

the graphic organizer during the second and third days of the unit. Results indicated that students in the graphic organizer group treatment performed significantly better on the unit posttests than those in the graphic organizer individual group. While the game format may have provided greater motivation than the rehearsal steps, working in groups has the potential to encourage engagement that individual tasks do not.

Research examining cooperative learning indicates that the types of tasks students are asked to complete in groups and the interaction required to complete a task play an important role in the effectiveness of group work. The task of identifying rhetorical patterns and putting that content into graphic organizer form is one that has the potential to prompt students to reason, evaluate, and justify their thinking.

Summary

The three instructional approaches reviewed in this section; direct instruction, scaffolding, and cooperative learning, were important elements of instruction in facilitating student understanding and use of rhetorical patterns to generate graphic organizers representing domain content in this study. Direct instruction provided students with knowledge of rhetorical patterns. Scaffolding instruction ensured that students had the level of support needed to apply knowledge of rhetorical patterns to textbook content in order to construct graphic organizers. As students engaged in cooperative learning, they had the opportunity to analyze and discuss rhetorical patterns and graphic organizer construction as well as the content represented by the graphic organizers. One important outcome of this instruction was to determine if students could apply their knowledge of rhetorical patterns and graphic organizers to textbooks from other domains. I review literature related to transfer in the next section.

Transfer

Transfer is frequently defined as applying knowledge or skills from one context to a different or new one (Bransford, Brown, & Cocking, 2000; Detterman, 1993; Graves, 2004). Near transfer occurs in situations that are like the original learning task except for a few differences (Detterman, 1993). Far transfer occurs when skills or knowledge are transferred to a novel or new situation. Educators often assume that transfer is something that occurs automatically after instruction (Perkins & Salomon, 1988).

Based on these descriptors, the concept of transfer appears to be fairly straightforward. Research examining transfer, however, has produced inconsistent results with some reviewers contending that there is little evidence that transfer occurs at all (Detterman, 1993). Much of the difficulty, according to Lobato (2006), stems from problems with what she identifies as "classical transfer" (p. 432). Classical transfer refers to a similarity theory which proposes that the degree to which the original learning task and the new situation are similar will determine how much transfer takes place. Lobato contended that viewing transfer in this way makes the transfer task an "occurrence"; one simply needs to facilitate the task. Unfortunately, such a view places the observer rather than the learner in a primary position. This view of transfer also deemphasizes context. A functionalist view of knowledge where the mind contains knowledge that is applied as needed is the basis for classical transfer (Lobato, 2006; Packer, 2001). The task context therefore is separated from the task itself. Additionally, the environment including people, material, and interaction are viewed as either supporting or interfering with transfer, not impacting it. Lave (1988), however, found that settings affect transfer providing evidence that knowledge is not applied consistently in all situations. Similarly,

when discussing how strategies frequently failed to be transferred, Garner (1990), maintained that settings or context must be considered since goals often change across settings thus impacting strategy transfer.

Transfer is viewed as the main purpose for education and is often used as the test to determine effectiveness of instruction (Barnett & Ceci, 2002; Graves, 2004). Lobato (2006) maintained that a new metaphor for transfer may be necessary and research must include what is being transferred, who is engaged in transfer, and the context in which the transfer takes place.

Sternberg and Frensch (1993) identified four mechanisms of transfer: encoding specificity (Tulving & Thomson, 1973), organization, discrimination, and set. Each of these mechanisms address issues of retrieval, information storage, relevance of information, and mental set which focus only on cognitive issues related to transfer. This type of focus is on *what* happens where as a process view of transfer will include the *why* and *how*. With this in mind, Lobato identified three additional transfer mechanisms; *focusing phenomena* which connects varying characteristics in the environment and identifies how they impact skill or knowledge transfer, *social framing* in which common features of the classroom contexts in which transfer occurs are recognized, *discerning differences* which identifies the differences between situations where transfer could be expected to occur not just similarities as has been the focus in classical transfer research.

The once seemingly simple concept of transfer is far more complex when analyzing the mechanisms that may impact the transfer process. With this in mind, Barnett and Ceci (2002) developed a taxonomy that can be used to determine where a task falls in a continuum between a near and far transfer task. The taxonomy is in two

parts; the first part identifies the content of transfer in three areas; learned skill, performance change, and memory demands. In each of these areas, the task can be applied at a specific level such as transferring a learned skill in proceduralized steps or at a general level in applying a principle. For performance change, the task could be looking for the specific transfer of speed or transferring an overall approach to a task. For the area of memory demands, the transfer might simply require doing a task or it might have broader expectations requiring recognition, recall, and execution. A transfer task might include all three areas but at different levels of specificity. For example, a transfer task for a math skill might require a student to use a specific procedure rather than a principle (learned skill) with accuracy not just speed (performance change) but recall the skill when recognizing that it needs to be used and executing it rather than just executing it alone (memory demands). Applying the procedure is more basic than applying a representation or principle. Requiring accuracy for the procedure demands more than just speed and requiring recall; recognition, and execution is more demanding than demanding execution alone.

As stated, recent discussions on transfer stress the impact of context. The second part of Barnett and Ceci's (2002) taxonomy identifies six features of context that can determine whether transfer tasks are near or far. These features are: knowledge domain, physical context, temporal context, functional context, social context, and modality. The knowledge domain refers to the difference in the knowledge domain from the original task to the transfer task. The physical context refers to whether the task is transferred to a setting similar to the one in which it was learned such as school or to a different one such as at home. The temporal context refers to timing whether it is the amount of time

between the learned task and the transfer task or whether time constraints are put on the task. The functional context refers to whether the task is a function of school or of daily life. A task performed as a function of one environment might not transfer to another. Social context refers to whether a task is performed alone or with others. Barnett and Ceci stated that little research has evaluated the connection between collaborative learning and transfer. Modality refers to the form of response in the transfer task in comparison to the original learning task. This could include such modes as written, verbal, or hands-on.

This taxonomy provides a means to analyze the transfer tasks that some students in the study were asked to do. Students were asked to construct graphic organizers using passages from two different texts (social studies and health). Students described their thinking processes as they constructed a graphic organizer for each of those passages. Based on Barnett and Ceci's taxonomy the transfer task would require the students to recall and recognize the rhetorical pattern, and apply their knowledge of the rhetorical pattern/graphic organizer strategy to produce graphic organizers for the passages they were reading. The students were evaluated based on whether they could identify the rhetorical pattern in passages from both the social studies and health texts and accurately construct the graphic organizer.

These transfer tasks with regard to functional, social, and modality elements of the context were considered near transfer tasks. The tasks were closer to the middle of the continuum between near and far transfer with regards to knowledge domain (social studies vs. health), physical context (task occurs in the same room at school vs. in a different room at school) and temporal context (task occurs at the same time as

instruction vs. a week later). The process of examining the content of what may be transferred as well as the context of the transfer tasks shows that these tasks generally were near transfer tasks except for the timing of the tasks after instruction and the use of different knowledge domains.

Summary

In this review of literature, I reviewed six studies that indicated that knowledge of text structure is positively related to comprehension (Meyer, Brandt, & Bluth, 1980b; Meyer & Poon, 2001; Newman, 2007; Russell, 2005; Slater, Graves, & Piche, 1985; Taylor, 1980). I described Chambliss and Calfee's approach for text organization analysis in which the reader identifies rhetorical patterns used by writers that reflect the purpose for their text (1998).

For this dissertation study, I used Chambliss and Calfee's (1998) rhetorical pattern approach to analyze text structure because the reader connects to the author as he/she identifies the purpose for the text and the reader can potentially transfer knowledge of rhetorical patterns to other expository texts because rhetorical patterns are based in writing rather than specific content,. Additionally, rhetorical patterns can be applied to large pieces of text and be displayed in graphic organizer form.

Graphic organizers are instructional tools that can enable students to focus on central ideas, identify relationships between ideas as well as find information more efficiently (DiCecco & Gleason, 2002; Guastello, Beasley, & Sinatra, 2000). Student-constructed graphic organizers increase student engagement. When students engage in the generative activity of constructing graphic organizers using rhetorical patterns, such a

task has the potential of facilitating students' comprehension of textbook content (Wittrock, 1991).

The theories of constructivism (Phillips, 1995) and social-constructivism (Vygotsky, 1978) were the theoretical foundation for instruction used in the rhetorical pattern/graphic organizer intervention. The task of constructing graphic organizers required students to actively engage in the task both individually and cooperatively. The instructional framework consisted of explicit instruction and modeling (Duffy, et al., 1986; Duffy, et al., 1987; Harris & Pressley, 1991) which helped students understand the reasoning for using the rhetorical pattern/graphic organizer strategy, scaffolding (Wood, Bruner, & Ross, 1976) which provided students with an appropriate level of support as they proceeded through the tasks, and cooperative/collaborative learning (Cohen, 1994; Slavin, 1991) which facilitated student learning through interacting with other students as they learned the rhetorical pattern/graphic organizer strategy.

In education, transfer of skills is often viewed as the standard to measure whether learning has taken place (Barnett & Ceci, 2002; Graves, 2004). Recent research has demonstrated that success in transfer must consider more than whether a skill is applied in a new situation (Garner, 1990; Lave, 1988). A continuum that analyzes transfer with regard to changes in performance, use of learned skill, and memory demands as well as contextual issues such as knowledge domain, physical context, timing, function, and modality was used to identify the level of transfer that was examined in this study (Barnett & Ceci, 2002).

In this chapter, I reviewed literature suggesting that students who have knowledge of text structure may have better comprehension of expository text than those who do not

have text structure knowledge. In this dissertation study, I focused on Chambliss and

Calfee's rhetorical pattern approach which connects the reader to the author as the reader

identifies the author's purpose, is based in rhetoric rather than content making application

to expository texts from different domains possible, and can be displayed in graphic

organizer form. Therefore, the purpose of this study was to examine the effect of

providing sixth-grade students with explicit instruction in rhetorical patterns and using

those patterns to represent the content graphically on students' ability to comprehend

social studies text. The methodology for this study is presented in chapter 3.

Chapter 3

METHODOLOGY

Introduction

The purpose of this study was to examine the effect of providing sixth-grade students with explicit instruction in rhetorical patterns and using those patterns to represent content graphically on students' ability to comprehend content in social studies textbooks. After receiving explicit instruction in rhetorical patterns, students constructed graphic organizers using the rhetorical patterns to represent the content. I attempted to learn whether students, by learning rhetorical patterns and constructing graphic organizers to represent content using those patterns, were better able to comprehend social studies text as well as apply knowledge of rhetorical patterns to other texts.

I addressed the following questions in this research study:

1. How effective is explicit instruction in rhetorical patterns using student-constructed graphic organizers in comparison to routine social studies instruction in developing comprehension of social studies textbook content with sixth-grade students?

    a) How effective is explicit instruction in rhetorical patterns using student-constructed graphic organizers in comparison to routine social studies instruction in developing comprehension of social studies textbook content with sixth-grade students as measured by graphic organizer production?

    b) How effective is explicit instruction in rhetorical patterns using student-constructed graphic organizers in comparison to routine social studies instruction in developing comprehension of social studies textbook content with sixth-grade students as measured by written summaries?

c) How effective is explicit instruction in rhetorical patterns using student-constructed graphic organizers in comparison to routine social studies instruction in developing comprehension of social studies textbook content with sixth-grade students as measured by comprehension quizzes?

2. How do students in the rhetorical patterns/graphic organizer group and the routine social studies instruction group respond in think-aloud tasks with social studies and health texts?

In Chapter 3, I describe the research methodology that was used for conducting my study by describing the design, setting and participants, materials, measures, and procedures. I then provide a detailed description of the training given to prepare the intervention teachers to implement the rhetorical patterns/graphic organizer intervention. I conclude the chapter by describing data analysis procedures. I refer to a pilot I conducted for six weeks in April and May 2008 at a middle school in central Pennsylvania (for more details see Appendix B).

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

The design for the study was a pretest-posttest two group design. The study had quantitative and qualitative components. The independent variables were instructional group (explicit instruction in rhetorical patterns and routine instruction) and time (pretest and posttest). The dependent variables were the scores from the student-constructed graphic organizers, written summaries, and comprehension quizzes. I analyzed one between-subject variable (group) and one with-in subject variable (time). These variables were analyzed quantitatively

A qualitative analysis of think-aloud responses was completed after a random sample of students from both the comparison and intervention groups verbalized their thinking while constructing a graphic organizer based on a passage from the social studies text and a passage from the sixth-grade health text. The student responses gathered from think-aloud tasks were analyzed qualitatively.

Additional data were gathered when a trained assistant and I observed each class once a week for six weeks to identify routine social studies instruction prior to the implementation of the rhetorical patterns/graphic organizer intervention. During the intervention implementation, the comparison classes were observed once a week to document ongoing routine social studies instruction and the intervention classes were observed once a week to collect data on the implementation process and treatment fidelity.

Setting and Participants

The setting was a school district in central Pennsylvania. The participants were sixth-grade students and social studies teachers at middle schools in the district.

Description of Schools

The participating sixth-grade students attended four middle schools in central Pennsylvania. The middle schools include students in sixth through eighth grades. In the middle schools, teachers and students at each grade level are assigned to teams which facilitate consistency of instruction and communication. The academic core includes the subjects of math, reading, English, social studies, and science. Sixth-grades student receive two periods of language arts instruction at the beginning of the day before changing classes for social studies, science, and math. The language arts program uses

the same materials as and is a continuation of the reading instruction provided to students at the elementary level. Students receive social studies instruction for 40-43 minutes a day, five days a week.

Since the school district has a diverse student population with varying socio-economic levels, I chose to do this research in four middle schools to control for these variables. Descriptive data about each middle school is provided in Table 1. Demographic data specific to the sixth grade in each building is provided in the next section. The intervention groups were in Middle Schools A and B and the comparison groups were in Middle Schools C and D.

Table 1

Descriptive Data for Four Middle Schools

School	Number of Students	Percentage Free and Reduced Lunch	PSSA Reading[a] 2008	2009
A	653	21	71	74
B	500	46	53	52
C	610	44	58	56
D	716	12	79	77

[a]Numbers indicate percentage of students performing at proficient and advanced levels on the Pennsylvania State System of Assessment reading test.

Students

The student participants were 238 sixth-grade students from four middle schools in central Pennsylvania. Descriptive data on the sixth-grade students is provided in Table 2.

Table 2

Descriptive Data on Sixth-Grade Students

School	Number of Students	Gender		Demographics			
		Male	Female	Caucasian	Black	Hispanic	Other
A	71	43	28	59	6	2	4
B	64	29	35	30	18	8	8
C	91	48	43	40	44	11	6
D	75	42	33	60	9	3	3

Seventh-grade students participated in the pilot study. The change to sixth-grade students for this study was made for two reasons. First, I learned from the pilot study that teacher commitment to the intervention was critical. I could not accurately assess the effects of the intervention unless they were conducted in a productive instructional environment. After the pilot was completed, I contacted four sixth-grade social studies

teachers with whom I had previously worked and therefore, had first-hand knowledge of their teaching expertise. All four teachers agreed to participate in the study. Secondly, during the think-aloud tasks completed as part of the pilot study, seventh-grade students already displayed some established study habits. Because sixth-grade students are just beginning secondary school, they may be more open to learning new approaches for independently studying text. Also, McGee (1982) found that fifth-grade students whether good or poor readers had more knowledge of text structure than third grade good readers suggesting that upper-elementary age students may be more developmentally prepared to learn text structures than younger students. A study by Chambliss and Murphy (2002) also found that fifth-grade students were more likely to recognize an overall argument text structure than fourth-grade students and suggested this developmental trend might have been more pronounced had they included sixth-grade students in their study.

Teachers

The four teachers who provided instruction for the study taught sixth-grade social studies in the district. Teacher A taught at Middle School A, teacher B at Middle School B, teacher C at Middle School C, and teacher D at Middle School D. Each teacher taught three or four social studies classes each day.

Teacher A had 10 years teaching experience including assignments in a fifth-grade self-contained classroom and sixth-grade language arts and social studies. Teacher B had 14 years teaching experience including assignments teaching first- and second-grade English Language Learners and sixth-grade language arts and social studies. Teacher C had 12 years teaching experience including first- and second-grade and sixth-grade language arts and social studies. Teacher D had 20 years teaching experience

including assignments in small-group math instruction, self-contained sixth-grade, and sixth-grade language arts and social studies. All four teacher participants had a master in education degree. Teachers A and B taught the intervention while teachers C and D taught the comparison classes.

Teachers were assigned to teach intervention or comparison groups based on a number of factors. First, Schools A and D differed from Schools B and C. Schools B and C had student populations with two to three times the number of students on free and reduced lunch than Schools A and B. On the Pennsylvania State Assessment the percentage of students who performed at the proficient level in reading was approximately 20 percentage points lower for Schools B and C than the students who performed at the proficient level in Schools A and D. To take into account these socio-economic and academic factors, Schools A and D needed to be in different groups, as did Schools B and C. The best solution would have been to randomly assign one school (and its teacher) from each pair to the intervention. However, due to teacher preferences, random assignment could not be made. The teachers who taught in Schools C and D were willing to participate if their involvement did not require a major change from their regular instruction. Thus, School C and D became the comparison condition, while Schools A and B became the intervention condition.

Although random assignment of teacher/school to comparison or intervention instruction could not be made, all four teachers were similar with regards to level of education, years of experience, and experience teaching sixth-grade language arts and social studies. Not only were the teachers well matched in experience and education, they

were similar in their effectiveness in teaching required content, as documented in the pre-intervention observations described below in the Observations section and in chapter 4.

While researchers in a laboratory can control variables particularly by using random assignment, there are many contextual variables that are difficult to control in natural social settings such as the four schools in the study. Yet often the most effective way to examine an instructional intervention for classroom use is in a natural classroom setting (Schoenfeld, 2006). Therefore, for this study the best design did not include random assignment of teachers.

Gall, Gall, and Borg (1999) stressed the importance of providing descriptive information to demonstrate that, while random assignment may not be possible, participants were matched or similar. This kind of descriptive information for each teacher is provided in chapter 4.

Prior to intervention implementation, the intervention teachers attended an in-service workshop to prepare them for teaching the intervention. The details of this in-service are described later in the chapter.

Materials

The main source of content for sixth-grade social studies in the district is the textbook *Harcourt Horizons World Regions* (Berson, 2003). Sixth-grade social studies teachers begin the year by teaching the five areas of social studies (geography, history, economics, culture and society, civics and government). For the remainder of the year, teachers cover the world regions of United States, Canada, and Middle and South America including Mexico, Central America and the Caribbean. If time allows, portions of Africa and Asia are included as well.

Description of the Textbook

The textbook is organized by units with each unit covering a different region of the world. Each unit is divided into chapters which focus on a country or a group of countries within a region. Each chapter is divided into lessons which are then divided into subsections. For example, unit two covers the region of Middle and South America. The three chapters within the unit are Mexico, Central America and the Caribbean, and South America. The first lesson in the Mexico chapter is called "A Rugged Land" and the subsections are "Mexico's Landforms" and "Climate and Vegetation" (Berson, 2003, pp. 172-175).

Chambliss and Calfee (1998) identified three purposes for textbooks: to inform, to argue, and to explain. The World Regions textbook was written with the purpose of informing and used descriptive rhetorical patterns to tell about countries, landforms, governments, or people and sequence rhetorical patterns to tell about historical events. As indicated in chapter 2, Chambliss and Calfee (1998) illustrated these structures (list, topical net, matrix, hierarchy, linear string, falling dominos, branching tree) in graphic form (see Appendix A). For the purposes of this study, chapters five and seven were the focus of instruction. I analyzed each subsection to identify the rhetorical pattern used. Each subsection in the lessons for chapters five and seven with the related rhetorical pattern are listed in Table 3 below.

Table 3

Chapters, Lessons, and Subsections from World Regions Textbook with Text Structure

Chapters, Lessons, Subsections	Text Structure
Chapter 5 – Mexico	
Lesson 1 – A Rugged Land	
Subsection – Mexico's Landforms	Topical Net
Subsection – Climate and Vegetation	Topical Net
Lesson 2 – Creating a Mexican Culture	
Subsections – The Olmecs, The Aztecs, The Mayas, The Spanish	Matrix
Lesson 3 – Yesterday and Today	
Subsection – Building a Nation	Linear String
Subsection – Mexico's Economy	List
Subsection – Mexico Today	List
Chapter 7 – South America	
Lesson 1 – A Vast Land	
Subsection – Land Regions	Topical Net
Subsection – A Range of Climates	Topical Net
Subsection – Waters of South America	Topical Net
Subsection – Rich in Resources	List
Lesson 2 – Cultures and Lifeways	

Subsections – The Earliest South Americans,

The Incas	Matrix
Subsection - A Blend of People	Branching Tree
Subsection – Ways of Life	Topical Net

Lesson 3 – Building a Future

Subsection – Move Toward Independence	Branching Tree
Subsection – South America Today	List

It should be pointed out that the chapters do not reflect the same geographic or political divisions. Chapter five presented content about Mexico, a country, whereas chapter seven presented content about South America which is a continent. The teachers directed student attention to this inconsistency to ensure they were not confused by the way the two geographic regions were treated in the text.

Also, to counter balance the order content was presented, one teacher each in the comparison and intervention groups began the study teaching chapter five while the other two teachers taught chapter seven first.

Inter-rater Reliability for Text Analysis

To confirm that my analysis of the text was accurate, I trained a reading specialist in Chambliss and Calfee's (1998) rhetorical patterns and asked her to analyze each lesson and identify the rhetorical pattern. For training purposes, I explained each rhetorical pattern that is used by authors when writing to inform (i.e. list, topical net, hierarchy, matrix, linear string, falling dominos, branching tree) and showed an example passage that was organized according to each pattern. After explaining the patterns, the reading specialist read four other passages and identified what she considered to be the rhetorical pattern. We agreed on the pattern for each practice passage. I gave the reading specialist the sample passages and descriptors of each rhetorical pattern and asked her to read each subsection in chapters 5 and 7, make a graphic organizer based on the rhetorical pattern, and identify the rhetorical pattern for that subsection.

We met again about a week later to compare her rhetorical pattern identifications for each subsection with mine. We agreed on 66% (10 of 15) of the pattern identifications. On four of the five passages where we did not make the same identification we agreed as to whether they were descriptive or sequential. On two of the descriptive passages, we discussed whether the details were connected tightly enough to the main topic to be considered a topical net. In both cases we decided that the details were loosely connected and therefore the rhetorical pattern was a list. On a third descriptive passage, we discussed whether the passage was clearly organized according to climate at specific elevations and therefore was a matrix. While the climates at specific elevations were part of the passage, this pattern was not followed consistently throughout the passage and so we identified the passage as a topical net.

We discussed a sequential passage about the history of South America and decided that it documented two series of events occurring simultaneously and should be identified as a branching tree. On one passage my colleague identified a subsection as a linear string because it named two decades (i.e. 1940s, 1970s). After we discussed these dates we agreed that they really did not signify a sequence for specific events. We discussed whether the passage was a list or a topical net although the rhetorical pattern was not clear. We decided, given the variety of topics included in the section, that it was loosely organized as a list. As a result of these discussions we reached 100% agreement on the identification of the textbook rhetorical patterns in chapters 5 and 7 of Harcourt Horizons World Regions.

Rather than simply report the inter-rater reliability for the subsections in the text, I judged that it was important to report our discussions as well. Our discussion about the rhetorical patterns of specific passages demonstrates that this text in particular, and perhaps many others, does not always have clearly evident patterns that can aid students in comprehension and study of new content. This discussion lends support to the need for textbooks to be written in such a way that content is accessible and comprehensible for students.

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

Pretest

Prior to the beginning of intervention instruction, students in both comparison and intervention groups were asked to read a subsection from the text, construct a graphic organizer, and write a summary. Since the topical net rhetorical pattern is frequently found in text written to inform, this text structure was chosen for the pre- and posttests.

Two forms of the pre- and posttest were developed using subsections from the text that students would not cover during the school year. The subsections were Western Europe's Mainland (Form A) and Cities of Western Europe (Form B). Students within each class were divided with half the students taking Form A and the other half taking Form B (See Appendix C).

The pretest was conducted over two class periods. During the first class period, the teacher introduced the passage, reviewed vocabulary, and read the passage to the students. Students then reread the passage with a partner before reading it again silently. The purpose for reading the text to the students was to counter the effects of text difficulty and reading ability on students' efforts to construct graphic organizers and write summaries. The teacher explained that students needed to make a graphic organizer to represent the content in the passage. On the second day, students finished the graphic organizers and wrote a summary of the passage. The graphic organizers and summaries were collected for analysis.

Posttest

The posttest was conducted in the same way as the pretest. The forms for each student were counterbalanced. The graphic organizers and written summaries were collected for analysis.

Comprehension Quizzes

Comprehension quizzes were given during the second chapter of instruction. The purpose of the comprehension quizzes was to analyze the effect of the rhetorical pattern/graphic organizer intervention using a measure that more closely reflected

assessments typically given in content classrooms. Three quizzes on three subsections of text were given during the second chapter taught.

The comprehension quizzes were in two sections: multiple-choice and essay. The multiple-choice questions and essay assessed student knowledge of isolated facts presented in the subsection. The comprehension quizzes are in Appendix D.

Think-Aloud Tasks

After students completed the posttests, a random sample of students from both comparison and intervention groups completed two think-aloud tasks. Think-alouds are verbalizations a person makes of his/her thinking as he/she engages in a particular task (Pressley & Afflerbach, 1995). The purpose of the think-aloud tasks was to evaluate the strength of the intervention in an environment outside the classroom with a similar but different subsection from the social studies text. The second purpose was to evaluate the potential for transfer of the rhetorical pattern/graphic organizer intervention to a textbook from a different subject area. For the first think-aloud task, the students were presented with the subsection "Western Europe's Peninsulas" from chapter 8 of the social studies textbook (258 words). For the second think-aloud task, students were presented with the subsection "Four Parts of Physical Fitness" from chapter 11 of the sixth-grade health textbook (227 words).

When a student entered the room where the think-alouds were conducted, I engaged him/her in conversation in an attempt to reduce any apprehension. Since the purpose of the think-alouds was to evaluate transfer of the intervention to other texts, I wanted to reduce the impact of differing reading abilities on the task; therefore, I read the passages to them. I said, "Today I am going to read a section of your social studies book

to you. When I am finished, I want you to read it on your own. After you are finished, I am going to ask you to make a graphic organizer for this section of the text and tell me what you are thinking as you are making the graphic organizer." After students read the text silently, I reviewed the directions with them. I stressed the need to talk aloud while engaging in the task and provided models. I said, "Remember I want you to talk aloud while you are working. So you might say 'I am thinking that ……' or "I don't know….' ". I stressed to the students the importance of telling exactly what they were thinking, not what they thought I might want to hear (Pressley & Afflerbach, 1995). I also told the students that if they forgot about talking aloud, I would remind them as they proceeded with the task. I used scripted directions and cues to standardize the administration of the think-aloud tasks. Student responses were recorded and any written protocol produced by the students was collected for analysis.

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

Before the Intervention

Prior to the start of the rhetorical pattern/graphic organizer intervention, a trained observer and I did a series of observations in the classrooms of the four participating teachers over a six-week period. The trained observer was a retired elementary school teacher with 34 years experience. We met prior to beginning the observations and discussed the protocol chart (See Appendix E) and terms to use when identifying specific behaviors.

Each teacher was observed six times. Since each teacher instructs three or four social studies classes, the observations were rotated so individual classes were seen on two different occasions. The observer recorded the instructional activity, teacher actions,

and student actions every three minutes on a three-columned protocol chart. An interval of three minutes was chosen because three minutes is an adequate amount of time to record activities and identify them (Valli & Chambliss, 2007). Because using graphic organizers is part of a district initiative, documenting how they were used was an important component to these observations. After the observations were completed, the protocols were collected and analyzed.

During the Intervention

Two types of observations were conducted during the intervention. In the comparison groups, the observations were the same as those conducted prior to the start of the study using the same protocol. Each comparison group teacher was observed once a week while the rhetorical pattern/graphic organizer strategy was being taught to the intervention group. In addition to the observations, the comparison teachers briefly recorded the instructional activities completed during the instruction of each text subsection. The second type of observation occurred when intervention teachers were observed weekly to monitor treatment fidelity. The observer was a retired elementary school teacher with 30 years experience. This observer used the treatment fidelity checklist found in Appendix F to monitor whether intervention teachers were following the three-day time allotment for each subsection and completing the specific activities designated for each of those days. I also conducted random observations of the intervention teachers to gather data on intervention implementation.

Procedures

Intervention Groups

In this section, the procedures used to implement the rhetorical patterns/graphic organizer intervention are explained. I describe the introductory lessons, the rhetorical pattern lessons, and the time allotments for text subsections.

Introductory lesson. After completing the pretest, the intervention groups were introduced to the concept of rhetorical patterns over two class periods. The teachers were given explicit plans for these two lessons (See Appendix G). They saw these lessons modeled previously as I used the same lesson to introduce the rhetorical patterns during their in-service training.

During the first lesson, the teacher discussed the purpose as well as the potential benefits of applying knowledge of rhetorical patterns. The teacher introduced the five patterns that were found in the two chapters that would be the focus of instruction (topical net, matrix, list, linear string, branching tree). The students were told that the purpose of the social studies book was to inform or tell about what a country or people is like or the kinds of events that have happened in that country. The teacher displayed Chambliss and Calfee's graphic (1998) describing textbook writing on an overhead or power point and pointed specifically to the "inform" column. The teacher explained how texts that inform usually use patterns to describe or show sequence. From this point on in the lessons, the teacher briefly introduced the rhetorical patterns for description (list, topical net, matrix) and sequence (linear string, branching tree). She displayed a poster with the graphic representation of the rhetorical pattern and, using subsections from the recently completed chapter on Canada, illustrated how identifying the rhetorical pattern

and putting the information in graphic organizer form can help students recognize main ideas and details. (The branching tree graphic organizer was based on a section of text from the chapter on Eastern Europe as the chapter on Canada did not contain a passage that was organized as a branching tree.) (See Appendices I and J) A more detailed description of the introductory lesson is included in the section on the intervention training.

Rhetorical pattern lessons. The lessons for the intervention groups moved through three phases: Phase 1-Explicit Instruction/Modeling/Co-construction, Phase 2-Cooperative Construction, Phase 3-Independent Construction. These phases reflected the instructional framework presented in chapter two.

Explicit instruction (Graves, 2004) and modeling provided students with the information necessary to construct graphic organizers reflecting rhetorical patterns. When constructing graphic organizers cooperatively, students had the opportunity to engage in discussion about the graphic organizer process and begin to develop individual proficiency in using the strategy (Vermette & Foote, 2001). When students engaged in independent construction, the goal was for them to construct the graphic organizer and summary without teacher assistance. Implicit in the three phases is scaffolded support for students (Larkin, 2001). Throughout the process of learning rhetorical patterns and constructing graphic organizers students received support from the teacher and other students as they worked towards applying this strategy independently (Beed & Hawkins, 1991; Graves, 2004).

The graphic in Figure 1 provides a visual of the gradual release of responsibility model that was used in the study. This model is similar to the approach used by Newman

in her dissertation study teaching rhetorical patterns to third-grade students (Newman, 2007; O'Flahavan, 1994). The lower triangle shows the gradual reduction of teacher support throughout the three phases of the study. The upper triangle shows the gradual increase of student responsibility as they proceeded through the three phases of the study. It must be pointed out, however, that this visual represents the gradual release of responsibility for the class as a whole and does not reflect the fact that individual students, depending on their level of proficiency with the task, may have required more or less support as they were learning rhetorical patterns, constructing graphic organizers, and writing summaries (Pearson & Gallagher, 1983).

Figure 1. Gradual release of responsibility phases.
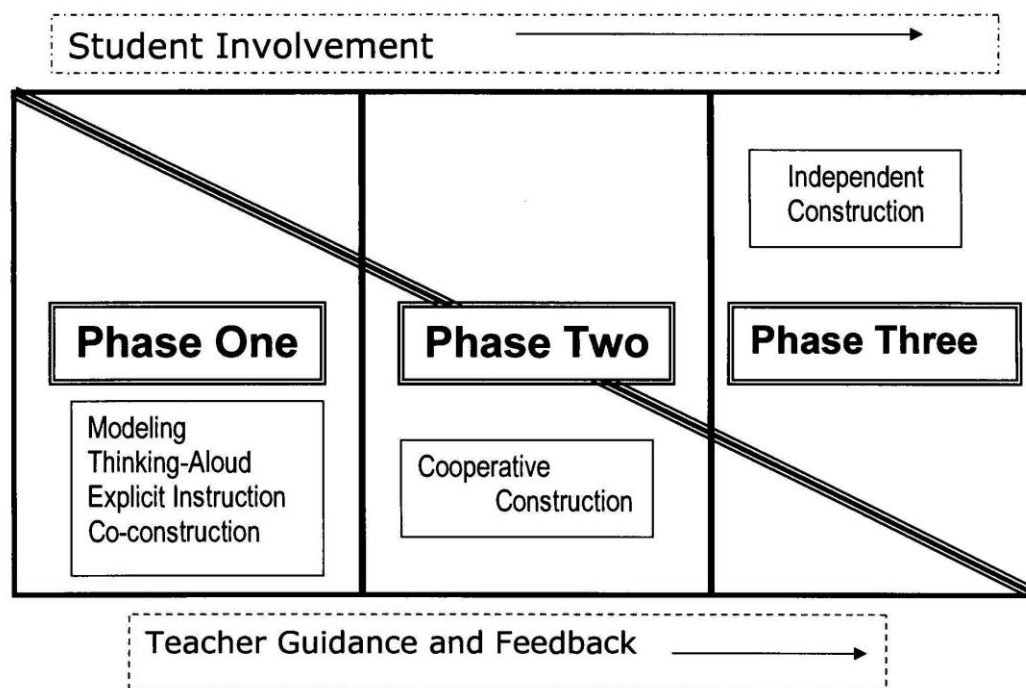
Teachers provided explicit instruction in the specific rhetorical patterns and modeling of graphic organizer construction and written summaries for the subsections in chapters 5 or 7. Explicit instruction in graphic organizer construction and written

summaries involved describing the steps while thinking aloud to demonstrate the thinking processes students would engage in to complete these tasks. For example, the teacher said, "We just read the subsection called "Mexico's Landforms". I am thinking about which rhetorical pattern fits this text. I see that the text is describing the landforms. Since it is a description, I know that the pattern will have to be a list, a topical net, or a matrix. This subsection is talking about one topic, landforms, and names some different landforms. It is not just a series of ideas, like I would find in a list. This text has a topical net structure." Teacher think-aloud during modeling was critical so students heard the kind of thinking they would need to engage in when they completed the task independently. The teacher proceeded by modeling how the subsection title would go in the center of the topical net and each landform would be placed in a circle attached to a line coming from the center. The teacher modeled how to add key details about each landform to each of the circles. Once the graphic organizer was completed the teacher engaged in the same type of thinking aloud to model how to write a summary. The teacher demonstrated by starting with a topic sentence, including sub-topics and details, and completing the summary with a concluding sentence.

The teacher began co-constructing the graphic organizers and written summaries with the students after the students had watched the teacher model constructing a graphic organizer using that rhetorical pattern. During co-construction the teacher released some responsibility to the students by eliciting their responses and engaging them in discussion throughout the process of graphic organizer construction. Following graphic organizer construction, the teacher and students co-constructed the written summary of the

subsection with the teacher encouraging students to suggest what information should be included and how it should be written.

During the cooperative construction phase, students worked in pairs. After reading and discussing the subsection as a class, pairs of students worked together to identify the rhetorical pattern, create the graphic organizer, and generate a summary of that subsection. The teacher provided scaffolded support as she monitored student progress on the graphic organizer and written summary tasks. Students at this stage were taking on greater responsibility for the task but had the benefit of peer input as they moved through the graphic organizer construction and summary writing together.

During the independent construction phase, students worked alone to develop graphic organizers and written summaries. The teacher monitored individual student progress and provided support where necessary. At this point, the teacher released most, if not all, responsibility for the task to the students. After reading and discussing the next subsection as a class, students identified the rhetorical pattern, created the graphic organizer, and generated a summary of that subsection. Because the rhetorical patterns varied with specific passages in the text, the students' level of responsibility varied depending upon how much exposure they had had to a particular rhetorical pattern. I mapped out what level of responsibility students should have for each subsection. This chart is in Appendix K.

Time allotments for text subsections. The instructional time allotment for each subsection was three class periods. The class periods varied from 40-43 minutes depending on the schedules in each middle school. On day one, both comparison and intervention students engaged in activating strategies such as watching United Streaming

presentations, doing a word splash, or writing what they knew about the topic and doing a "Give 1, Get 1" activity where they circulated among their classmates giving and getting facts and information about the topic. Activating strategies are a key component of the Learning-Focused instructional model adopted by the district where the research was being conducted (Thompson & Thompson, 2005). The students read the text and the teacher led a brief discussion of the key concepts so that students had a basic understanding of the content. On day 2, the focus of instruction was on graphic organizer construction. On day 3, the focus of instruction was on writing summaries. Table 4 outlines the instruction and work activities that occurred during the three class periods for both the intervention and comparison groups.

Table 4

Instructional Time Allotment for each Textbook Subsection

	Comparison	Intervention
Day 1	Activating strategy, introduce new material, read subsection, discuss	Activating strategy, introduce new material read subsection, discuss
Day 2	Teacher Chosen Activity (e.g. note taking, worksheets, answering questions)	Graphic organizer construction
Day 3	Teacher Chosen Activity (e.g. note taking, worksheets, answering questions)	Written summary

The teacher followed this schedule throughout the study. Time was also allotted for

teachers to administer their own assessments for grading purposes. I discovered,

however, that if we continued with the schedule as planned, the intervention would be

interrupted by the administration of the Pennsylvania State System of Assessment tests

(PSSA) approximately one week before instruction was scheduled to end. After

discussing this issue with my advisor, we agreed that completing the study prior to testing

would be best for the student and teacher participants as well as the results of the study.

As a result of this decision, the instructional time spent on three shorter subsections was

reduced from three days to one day. The intervention teachers adjusted their teaching so that students were exposed to the text and identified the rhetorical pattern but they may not have completed the graphic organizer or summary.

Comparison Groups

     Preliminary lessons. While the intervention groups engaged in two days of introductory lessons on rhetorical patterns, the comparison groups participated in a vocabulary activity related to the chapter they were going to study (Ryder, 1985). I chose this activity because it was unrelated to the rhetorical pattern/graphic organizer intervention and yet would be beneficial to the students. The teacher identified 5-10 words from the upcoming chapter that would probably be unknown to the students. The teacher made four cards for each word: Card 1-pronunciation, Card 2-definition, Card 3-use of word in context, Card 4-the word itself. On the first day of the vocabulary activity, each student in the classroom was given a card. The students moved around the room finding other students with cards that went with their card. These students formed a group. As a group, they discussed their word and created a list of words that were related to the new word. Students then wrote on an overhead or chart paper the word, its definition, and the word list they generated. On the second day, one student from each group taught the new word to the rest of the class. The teacher facilitated student discussion of the related word list as to whether words on the list were synonyms, antonyms, an attribute, or non-attribute of the new word.

     Content instruction. After completing the two-day vocabulary activity at the start of the study, teachers began instruction on chapter 5 or 7 depending on which chapter they had been assigned. As indicated in Table 4, three days of instruction were devoted to

each subsection of text. On day 1, students in the comparison groups engaged in the same types of activating strategies as the students in the intervention groups. The students also read the subsection and the teacher engaged them in a brief discussion of the key concepts in the text so that students had a basic understanding of the content.

During days two and three the comparison groups completed instructional activities related to the content focus of the subsection. Since using graphic organizers is part of the Learning-Focused instructional model (Thompson & Thompson, 2005), instruction included some implementation of graphic organizers. However, as documented in chapter 4, the use of graphic organizers in the comparison groups consisted of filling blank spaces on teacher-constructed graphic organizers, looking at a graphic organizer on the board, or folding paper to make a graphic organizer and filling spaces with information. Additionally, teachers in the comparison groups had students engage in other activities such as drawing maps, completing worksheets, filling in study guides, taking notes or answering questions from the text.

Training for Intervention Teachers

The teachers providing the rhetorical pattern/graphic organizer instruction received training approximately one month prior to the beginning of the intervention. In her dissertation study with third-grade students, Newman (2007) provided a training session for the teachers that introduced the rhetorical pattern intervention. Her clear and detailed explanation of the procedures allowed me replicate her plan with modifications for my study.

Newman's training consisted of an introduction and an instructional phase. During the introduction, she explained her research questions, data analysis, and specific

terms. During the instructional phase, after the teachers read a text, she modeled and engaged in thinking aloud as she constructed the first half of the graphic organizer using the rhetorical pattern. The teachers then completed the graphic organizer and it was compared with Newman's own graphic organizer to evaluate their understanding of the process. She concluded the training with information on procedures for implementing the intervention.

In the current study, the training session for the intervention teachers consisted of three parts: Introduction to the Study, Instructional Training, and Procedural Information. The agenda for the training is presented in Figure 2.

Figure 2. Dissertation study training agenda

Dissertation Study Training
December 15, 2009
7:45-3:15 p.m.

I.   Introduction to the Study

II.   Instructional Training

     a. Text Patterns Introductory Lesson
     b. Constructing Graphic Organizers According to Rhetorical Patterns
     c. Writing Summaries
     d. Scaffolding Instruction
     e. What Will it Look Like?

III.   Procedural Information

     a. Schedule
     b. Three Day Plan
     c. Instructional Record Sheet
     d. Observations
     e. Pre- and Posttests
     f. Comprehension Quizzes
     g. Think-Alouds
     h. Collection of Graphic Organizer and Summary Samples

Introduction to the Study

I introduced the study by presenting the title and explaining the purpose for the research. I then introduced the research questions, the measures that would be used for assessment, and data analysis.

Instructional Training

The next part of the training was the instructional phase. The instructional phase consisted of five sections listed in Figure 2. Each of these sections is described in detail below.

Rhetorical patterns introductory lesson. I began the instructional phase of the training by using the same introductory lesson that teachers would use to introduce the rhetorical patterns to their students. I began the lesson by showing a picture of a brick wall with a diamond of blue bricks in it. I asked the teachers what pattern they noticed. They commented about the bricks being in a diamond pattern. I then showed the teachers a passage from a text book. I asked them what pattern they saw in this passage. The teachers made comments such as the paragraphs are indented and the lines are spaced. I explained to the teachers that while there was no visual pattern apparent in the passage, there was a pattern or a structure to the way the information was organized. I told them that if they were able to identify the pattern it would make it easier for them to identify the most important information and summarize the content. I then showed the teachers an overhead of Chambliss and Calfee's graphic describing textbook writing (Appendix A).

After explaining that the purpose of most textbooks is to inform, argue and/or explain, I pointed out that the main focus of the social studies book the teachers used in their instruction is to inform or tell about what a country or people is like and the kinds of

events that have happened in that country. Focusing on the inform strand, I explained

how texts that inform usually use patterns to describe or show sequence. I pointed out

that the list, the topical net, and the matrix are patterns used for description while the

linear string and branching tree are patterns used to show sequence. (I did not introduce

the hierarchy or falling dominoes rhetorical patterns because they were not used in the

chapters the teachers would be teaching.) I then introduced and described each rhetorical

pattern. To illustrate each rhetorical pattern, I displayed graphic organizer poster (see

Appendix I) and then showed the teachers a graphic organizer I had constructed using

subsections of text from the chapter which the teachers had recently taught on Canada

(see Appendix J.) Prior to introducing the rhetorical patterns, I gave the teachers a

handout (see Appendix H). The handout provided spaces for the teachers to show the

diagram for the each rhetorical pattern as well as write the name. After each rhetorical

pattern was introduced, the teachers stopped and filled in their handout.

The introductory lesson used during training served two purposes. First, the

lesson was a way of providing background and briefly introducing the rhetorical patterns

to the teachers before they engaged in constructing them. Second, the lesson served as a

model because the teachers used this exact lesson to introduce the rhetorical patterns to

their students at the beginning of the intervention.

Constructing graphic organizers using rhetorical patterns. After completing the

introductory lesson, I began introducing the rhetorical patterns one at a time. I had the

teachers read the "Land Regions" subsection from Lesson 1 in chapter 7 on South

America. Using think- aloud and modeling, I demonstrated how to construct a graphic

organizer using the topical net structure. I said "The title of this subsection is 'Land

Regions'. I am going to put that in a circle in the middle of my topical net graphic

organizer because that is what this section is about." I discussed with the teachers the

need to add or modify the subsection headings for graphic organizers as some headings

do not clearly describe the content of that section. For example, I added *of South America*

to *Land Regions* to identify exactly what region is being referred to on the graphic

organizer.

I continued my modeling and thinking aloud by saying, "I see that one of the land

regions in South America is the Western Mountains so I am going to make a line from

the circle with *Land Regions of South America* written in it and at the other end of the

line make a rectangle and write *Western Mountains* in that rectangle." To develop this

specific topic area of the topical net graphic organizer, I said, "The Andes Mountains are

the western mountains of South America so I am going to draw a line from the rectangle

containing *Western Mountains* and make an oval. In the oval I am going to write *Andes*."

I talked about how the text gives some details about the Andes so I would include the

ideas that I felt best described the mountains. I continued to think aloud and model, "I see

that most of the peaks in the Andes mountains are over 20,000 feet so I am going to make

a line from the oval that says *Andes* and at the end of the line write *many peaks over*

20,000 feet" I added a second line coming from the oval with *Andes* in it and wrote that

the Andes were a *cordillera-system of parallel mountain ranges*. I explained that the

students need to decide, based on their own understanding and knowledge, whether to

include the definition of a term on the graphic organizer such as I did for the word

cordillera. I also modeled how I decided not to include specific information from the

text. For example, I did not include the elevation of the highest peak in the Andes because I had already written about many peaks being over 20,000 feet.

I continued thinking aloud and modeling as I drew another line coming from the center circle with *Land Regions of South America* written in it and at the end of the line made a rectangle and wrote *Eastern Mountains* in the rectangle. From the rectangle I drew two lines and made ovals at the end of each. In one oval I wrote *Brazilian Highlands* and in the other oval I wrote *Guiana Highlands*. I modeled rereading the text and adding additional details (ex. *south of the Amazon, escarpment, no higher than 9,500 feet*) at the end of lines coming from the oval with *Brazilian Highlands* in it.

At this point I stopped modeling and thinking aloud and asked the two teachers to complete the graphic organizer on their own. The teachers engaged in discussions while they were working and addressed topics such as matching the shapes (ex. circle, rectangle, oval) to the importance of the ideas on the topical net and including the same types of details about each land region. After the teachers completed their graphic organizer, I compared it with mine to determine if any additional direction was needed. Their discussion during the graphic organizer construction and completed graphic organizer provided evidence that they understood this rhetorical pattern. Teachers were encouraged to ask questions at all times throughout the graphic organizer construction process.

We followed the same procedure for the matrix rhetorical pattern as was done for the topical net rhetorical pattern. The teachers reread the subsections *The Olmecs, The Mayas, The Aztecs,* and *The Spanish* from chapter 5 in the social studies textbook. I reminded the teachers that a matrix is used to compare two or more people, groups of

people, objects, or countries based on specific attributes. While thinking aloud, I showed that similar attributes such as time period, houses, food, innovations, and what the groups were known for were described in the text. I modeled and thought aloud as I drew the matrix and said, "I will have eight columns and five rows in my matrix. The tops of the columns will be filled in with the attributes and the first space in each row will have the names of the groups." I wrote *Ancient Civilization, Time, Location, Food, Religion, Known For,* and *Innovations* in the top space of each column. I also suggested making a *Notes* column to include information that they felt was important but didn't fit with any other attribute. I wrote the names of the four civilizations in the first space of each row.

I modeled filling in the information on the matrix for each topic for the Olmecs and repeated it for the Mayas. For example, under *Time* for the Olmecs, I wrote *early 1200s,* under *Location* I wrote *coast of Gulf of Mexico,* under *Food* I wrote *fished* and *farmed*, under *Religion* I wrote *many gods* and *jaguar god*, under *Known For* I wrote *large stone carved faces*, under *Innovations* I wrote *counting system*, *calendar*, and *picture writing* and under *Notes* I wrote *known as the "Mother Civilization"*. I pointed out that in some cases the text may not provide information about a particular attribute for a particular group and in that case it is appropriate to leave the space blank. The teachers then completed filling in the information for the Aztecs and the Mayas.

The following conversation took place while the two intervention teachers were completing their construction of the matrix graphic organizer on *The Olmecs, The Mayas, The Aztecs,* and *The Spanish*. Their conversation demonstrated their engagement in the task and developing understanding of how to construct a matrix to reflect text content.

The teachers were discussing what the Aztecs were known for in order to place that information on the graphic organizer as well as inclusion of the Nahuatl language.

T^2 You could even put the marketplace under things they thought up…

T^1 Okay…(reading text) they have 5 million people…

T^2 because that's (referring to marketplace) adding new ways to their culture…

T^1 Contributions…if you look at page 181 at the paragraph…

T^2 I put Nahuatl under…"Notes" (a category in the matrix for information not included elsewhere) because…it's worth noting but it really doesn't fall under any of the other categories…

The teachers engaged in other conversations about where information should be placed. I encouraged them to facilitate these kinds of discussions with their students as they constructed their own graphic organizers. For this particular graphic organizer, we recognized that the attributes of *Known For* and *Innovations* might be confusing and discussed that combining the categories would be appropriate.

After the teachers completed the graphic organizer, their organizer matched the one I had created. Their discussion and questions while constructing the graphic organizer and the graphic organizer they completed demonstrated they understood how to construct the graphic organizer representing the matrix rhetorical pattern.

Following the same procedure, I modeled and thought aloud as I constructed a graphic organizer to represent the list rhetorical pattern for the subsection "Mexico Today" from chapter 7, the linear string rhetorical pattern for the subsection "Move Toward Independence" from chapter 7, and the branching tree rhetorical pattern for the

subsection "A Blend of People" from chapter 7. When constructing the graphic organizer

for the section with the branching tree rhetorical pattern, the teachers needed some

coaching to recognize the third set of events that was occurring at the same time as the

other two sets of events. Once they identified the third set of events they were able to

accurately complete the graphic organizer. For each rhetorical pattern after I thought

aloud and modeled how to construct approximately half of the graphic organizer, the

teachers completed it. Their graphic organizers matched the one I had created and their

questions and discussions confirmed they understood each rhetorical pattern.

Written summaries. After the teachers learned the rhetorical patterns, I modeled

how to write summaries for the sections of text for which we had constructed graphic

organizers. We discussed the importance of using the heading of the text subsection to

form a topic sentence for the summary and using the information on the graphic organizer

as a guide in writing the summary. I returned to the list graphic organizer on *Mexico*

Today and modeled and thought aloud as I generated a written summary based on the

graphic organizer. To begin the summary, I modeled how to generate a topic sentence

using the heading at the top of the graphic organizer. I said, "First, to create a topic

sentence for my summary, I will take the phrase *Mexico Today* and write *There are a*

number of things happening in Mexico Today. I then moved on to summarize information

from the graphic organizer. I thought aloud and said that since the text was organized as a

list I would summarize the details in the list. Since population growth is one thing

happening in Mexico today, I wrote on my summary *The population is growing and there*

are almost 100 million people." Since the next two details were about the cities in

Mexico, I modeled combining ideas in a sentence for the summary and wrote *Seven of 10*

people live in cities and that causes problems like lots of traffic and people living in poor housing. I continued by showing how to add the additional details about jobs and changes in the country of Mexico *Many people in the city do not have jobs. Mexico is growing because they are building roads, seaports, and providing better education*. We discussed the summary writing process and the teachers indicated they understood how to write a summary using the list rhetorical pattern.

I engaged in similar modeling and think-aloud to write the summary about the Olmecs, Mayas, Aztecs, and Spanish using the matrix graphic organizer. While thinking aloud, I said *"The first thing I do when writing this summary is to write the topic sentence. Since the topic is the four different civilizations and the information shows how they are alike and different, I will write '*The civilizations of the Olmec, Maya, Aztec, and Spanish were alike and different.' "* I talked about how I couldn't include every piece of information for each civilization, so I would summarize how they were alike and different. For the Olmecs and the Mayas, I noted their similarities when I wrote this sentence on the summary: *The Olmecs and Mayas were alike because they both farmed, worshipped a jaguar god, used a counting system, and calendars.* In my next sentence, I wrote a sentence about their differences: *They were different because the Olmecs were known for making stone carvings and the Mayas were known for building large temples and cities.* To model how details could be combined in sentences, I wrote both the likenesses and differences for the Mayas and Aztecs in the next sentence of the summary: *The Aztecs were like the Mayas because they also developed cities but were different because they were an empire.* Finally, since the Spanish were more different than like the other three civilizations these differences were noted in the last sentence: *The Spanish*

were different than the Olmecs, Mayas, and Aztecs because they brought the Roman Catholic religion and the Spanish language to the people of Mexico. In a discussion after the completion of the summary, the teachers indicated they understood the process of writing the summary using a matrix rhetorical pattern.

The final summary I modeled was on the subsection "Building a Nation" that was organized as a linear string. I modeled writing the topic sentence using the heading from the subsection *Many events occurred as Mexico was being built as a nation*. I talked about the fact that since a linear string shows a sequence of events, dates or sequence words should be evident in the summary. I thought aloud as I said the first important event was when the Mexican people rebelled against Spanish rule in 1810 and wrote *In 1810, the people first rebelled against the Spanish.* I continued showing the sequence of events as I added sentences to the summary and stressed the importance of using the dates as evidence of the string of events. The final summary is shown in Figure 3.

Figure 3. Model summary of subsection "Building a Nation".

Many events occurred as Mexico was being built as a nation. In 1810 the people first rebelled against the Spanish. They gained their independence on September 16, 1821. Between 1846 and 1848 Mexico fought the United States over territory and lost. In the late 1800s the leader Benito Juarez worked to end special church privileges, have elections, and improve education. In 1876 Portofiria Díaz helped develop the country but poor people lost their land to rich people. In 1910 Francisco Madero started a revolution to bring change and the revolution ended in 1917 with a new constitution that gave land back to the farmers and set the government as a presidential

democracy. Since 1929 the president has come from one party until the year

2000 when the president was elected from the other party.

In the follow-up discussion the teachers indicated they understood how to write a

summary using a linear string rhetorical pattern.

I then asked the teachers to write a summary for a subsection of text organized by

the topical net rhetorical pattern, "Land Regions" (of South America). I chose to have the

teachers practice writing a summary for this section because the topical net rhetorical

pattern occurs so frequently in the social studies text. They also wrote a summary of a

subsection called "Moves Toward Independence" which is organized using the branching

tree rhetorical pattern. Prior to having the teachers write their own summaries for these

two subsections, I reviewed a chart that outlined the characteristics of summaries using

the different rhetorical patterns. The chart is shown in Figure 4.

Figure 4. Summary characteristics chart.

Text Pattern	Elements that distinguish these summaries
List	series of facts
Topical Net	each 'spoke' or topic should be included
Matrix	words 'alike' and 'different' as items are compared and contrasted
Linear String	dates, sequence words
Branching Tree	uses the words "at the same time as", dates, sequence words

The teachers wrote the summaries of the "Land Regions" (of South America) passage

which was organized using the topical net rhetorical pattern and the "Moves Toward

Independence" passage which was organized using the branching tree rhetorical pattern.

The teachers continued to ask questions and clarify their understanding throughout the process and their completed written summaries demonstrated they understood how to write a summary with the graphic organizer as a guide.

Scaffolding instruction. During the third part of the instructional training, I introduced the three phases of instruction: explicit instruction/ modeling/ co-constructing, peer constructing, independent constructing. I explained to the teachers that the goal of the intervention was for students to be able to recognize rhetorical patterns in text, construct the appropriate graphic organizer, and write a summary with little or no assistance from the teacher.

I shared the definition of scaffolding by Wood, Bruner, and Ross (1976) which states that scaffolding is the "process that enables a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts" (p. 90). I talked about a number of key characteristics that identify the concept of instructional scaffolding. First, I said that scaffolding begins when the learner is engaged in the task by the adult. Second, the support provided in scaffolding involves simplifying the task so the learner recognizes when they have attained a particular level of learning. Third, by providing models, the teacher helps the student move beyond what they have already achieved. Fourth, when pointing out specific features of the task, the teacher provides reference points to the student so they can assess whether they are proceeding appropriately (Wood, Bruner, & Ross, 1976). I talked about how the support or direction students receive may be in verbal or nonverbal form (Stone, 1998).

I stressed that scaffolding requires ongoing diagnosis of student understanding. As Wood, Bruner, and Ross (Wood, Bruner, & Ross, 1976) explained, the tutor must

have theories about how the problem can be solved as well as about the tutee's present understanding and task performance abilities. Support involves "providing tailored assistance" that fits student need and levels of understanding (Larkin, 2001, p. 31). I concluded by saying that scaffolded support is gradually faded as the student gains proficiency; the ultimate goal is independent application of the learned skill or task (Beed & Hawkins, 1991; Graves, 2004; Lajoie, 2005).

I passed out the diagram showing the phases of instruction for each rhetorical pattern (See Figure 1). I explained that during phase one the teacher will be providing explicit instruction on the specific rhetorical pattern being taught. This instruction will include modeling and thinking aloud. I stressed that during this phase as the teacher senses students are beginning to understand the rhetorical pattern, she can encourage student participation in constructing the graphic organizer or summary or have the students co-construct the graphic organizer or summary with her. I explained that during phase two, the students would be engaged in cooperative construction of the graphic organizers and written summaries. During cooperative construction, students would work with a partner to construct the graphic organizer or summary according to the identified text rhetorical pattern. While students are working in pairs, I stressed that it was critical that the teacher constantly be observing what students are doing with their partners and provide scaffolded support depending on the students' level of need. Finally, during phase three students would work independently to construct a graphic organizer and to represent the rhetorical pattern of a particular subsection as well as write a summary. I explained to the teachers that they could provide support during independent construction but should base the support given on the needs and skill levels of individual students.

I passed out the Scaffolded Instruction-Rhetorical Patterns chart (See Appendix K). I showed the teacher how I mapped out the levels of support that would be provided to students as they learned the different rhetorical patterns. I stressed to the teachers that throughout this process they would need to provide individual scaffolded support to students who required it, particularly during cooperative construction and independent construction of the graphic organizers. As rhetorical patterns were repeated in the chapters, the chart indicated that students should work cooperatively and ultimately independently on constructing the graphic organizers and writing summaries. I reviewed this chart in detail with the teachers to ensure they could read it correctly since one teacher was starting with chapter 5 and one was starting with chapter 7. By the time we were finished, the teachers felt they understood how to develop student proficiency in constructing graphic organizers and writing summaries using a gradual release of responsibility model of instruction (Pearson & Gallagher, 1983).

What Will It Look Like? I included this section in the training to help the teachers understand what implementing the intervention on a daily basis would look like in their classrooms and mean for them in terms of making lesson plans. I gave the teachers an outline of the chapter subsections with the rhetorical patterns (See Table 3) and the three day plan (See Table 4). We reviewed these tables carefully and the teachers asked questions particularly about the three day plan. To help the teachers visualize how they would plan for the lessons, I gave them a set of sample lesson plans for the first subsection on landforms in Mexico in Chapter 5 (See Appendix L). These lesson plans used the EATS format that is part of the Learning-Focused Schools initiative being implemented in the district (Thompson & Thompson, 2005). EATS stands for Essential

Question, Activating Strategy, Teaching Strategies, and Summarize. The teachers

reviewed these lesson plans and felt better about having a set of plans to guide them as

they got started with the intervention. I gave the teachers a set of blank rhetorical pattern

graphic organizers (See Appendix I) to display in their classroom and refer to during

lessons. I also gave the teachers a flash drive with all the materials needed for the

rhetorical patterns introductory lesson as well as the blank rhetorical pattern visuals. The

teachers' questions and responses at the intervention training indicated they understood

what they were expected to do. I encouraged them to ask questions at any time

throughout the study. As the teachers began the study, I felt they were secure in their

knowledge of what they were expected to do to as they implemented the rhetorical

patterns/graphic organizer intervention and if they were unsure about a particular issue

they would ask for information. As evidenced by the observations in the intervention

classrooms, the teachers were prepared to teach the intervention and they asked questions

to confirm they were implementing all aspects properly.

Procedural Information

The final part of the training consisted of giving the teachers procedural

information about the study. I explained the procedural information to the intervention

teachers first and then met with the comparison group teachers to review procedural

information that was pertinent to them. For the intervention teachers, I reviewed the

specific dates for beginning and ending the study. I explained treatment fidelity measures

including the instructional record sheet and the treatment fidelity observations. I also said

that I would like to come and observe their classrooms to see the intervention being

implemented and the teachers were completely agreeable. I reviewed the directions for

the pre- and posttests. I gave the teachers some information about the comprehension quizzes and think-alouds that would be completed towards the end of the study and said I would provide more details when we were closer to implementing those measures. Finally, I asked the teachers to collect graphic organizer and summary samples that had been completed by their students and gave them folders to organize these work samples as they collected them.

When I met with the comparison group teachers, I reviewed the specific dates for beginning and ending the study. I went over the three day plan and stressed the need to spend three days on each subsection so that both comparison and intervention students would be spending the same amount of time on the content. The teachers agreed to follow this schedule. I explained that the purpose of the instructional record sheet was to document that they adhered to the three day plan and that observations of social studies instruction would continue throughout the study. I reviewed the directions for the pre- and posttests. I gave the teachers some information about the comprehension quizzes and think-alouds that would be completed towards the end of the study and said I would provide more details when we were closer to implementing those measures.

Data Analysis

As stated above, four measures were used to collect data to determine the effectiveness of the rhetorical pattern/student-constructed graphic organizer intervention: pretest, posttest, comprehension quizzes, and think-alouds. Other data were collected as observations were completed to document instructional practices in social studies classrooms prior to and during data collection.

Pretests and Posttests

For the pre- and posttests the students had to read a passage, make a graphic organizer to represent the content from the passage, and write a summary. In the next section I present the rubrics used to score the graphic organizers and written summaries.

Graphic organizers. The graphic organizers in the pre- and posttests were scored using the rubric shown in Table 5. The graphic organizer scores were analyzed using a mixed ANOVA with a between-subjects factor (group) and a within-subject instruction factor (time).

Table 5

Graphic Organizer Scoring Rubric

Score	Explanation of Score
5	A graphic organizer using the appropriate rhetorical pattern that displays the topic plus all of the text's subtopics with related details.
4	A graphic organizer using the appropriate rhetorical pattern that includes the topic (may not be clearly stated) plus all of the text's subtopics with some related details
3	A presentation of information which does not use the appropriate rhetorical pattern but demonstrates some awareness of text organization including some subtopics and some related details.
2	List of details
1	Incorrect content and/or little or nothing related to text; copying
0	No response

Written summaries. The written summaries were scored using the rubric shown in Table 6. The written summary scores were analyzed using a mixed ANOVA with a between-subjects factor (group) and a within-subject instruction factor (time).

Table 6

Written Summary Scoring Rubric

Score	Explanation of Score
5	The summary includes the text topic plus all of the subtopics with related details written in defined paragraphs to differentiate subtopics.
4	The summary includes the text topic plus all of the subtopics with some related details.
3	The summary includes some of the subtopics with some related details; the topic may or may not be stated.
2	List of details
1	Incorrect content and/or little or nothing related to text; copying
0	No response

Comprehension Quizzes

The comprehension quizzes were analyzed in two ways. The responses to multiple-choice questions were marked for accuracy. The responses to the essay questions were scored using the rubric in Table 7.

Table 7

Comprehension Quizzes Essay Scoring Rubric

Score	Explanation of Score
4	Response clearly identifies essay question topic and has relevant, supporting details
3	Response identifies essay question topic and includes most supporting details; there may be one inaccuracy
2	Response may or may not explain essay question topic clearly or may be incomplete; has one or two related details; may include incorrect or vague information
1	Response reflects an attempt to respond to essay topic; has unrelated or incorrect details
0	No response

Descriptive statistics (means and standard deviations) were calculated for scores on the multiple-choice and essay questions. T-tests were used to compare the means from

the comparison groups and the intervention groups on the multiple-choice and essay questions.

Think-Aloud Tasks

The recorded responses from the think-aloud tasks were transcribed. The transcribed responses were segmented into analysis units or sections that reflect a particular action or approach being used as the graphic organizers were constructed. These responses were read and reread using the constant comparison method (Glaser & Strauss, 1967) to develop categories for coding. Ongoing review and revision of coding categories was made until all analysis units could be accurately identified. Twenty-five percent of the transcriptions were coded by a reading specialist to establish inter-rater reliability. After coding was completed, the coded transcriptions were analyzed for patterns and themes.

Observations

The observations completed before the intervention began provided a record of social studies instructional practices in all 13 classrooms. Each observation lasted between 40-43 minutes (the length of the period) with one entry for instructional activities, teacher actions, and student actions being made every three minutes. The activities were coded and analyzed to identify what instructional practices made up routine social studies instruction in sixth-grade social studies classes.

During the intervention, observations were completed in comparison and intervention classrooms. The comparison classes were observed once a week to continue to gather data on routine social studies instruction and to ensure the comparison group teachers were following procedures for the study. The intervention classes were observed

weekly for treatment fidelity checks. In addition, I observed intervention teachers A and B to gather data on implementation of the intervention.

The statistical analysis that was used to examine the data is presented with the research questions in Table 8.

Table 8

Overview of Research Questions, Measures, and Data Analysis

Measure	Data Analysis

1. How effective is explicit instruction in rhetorical patterns using student-constructed graphic organizers in comparison to routine social studies instruction in developing comprehension of social studies textbook content with sixth-grader students?

    a.) How effective is explicit instruction in rhetorical patterns using student-constructed graphic organizers in comparison to routine social studies instruction in developing comprehension of social studies textbook content as measured by graphic organizer production?

Measure	Data Analysis
Scored student-constructed graphic organizers	Mixed ANOVA
Pretest	comparing intervention and
Posttest	comparison groups

b.) How effective is explicit instruction in rhetorical patterns using student-constructed graphic organizers in comparison to routine social studies instruction in developing comprehension of social studies textbook content with sixth-grade students as measured by written summaries?

Scored written summaries   Mixed ANOVA comparing

    Pretest   intervention and

    Posttest   comparison groups

c.) How effective is explicit instruction in rhetorical patterns using student-constructed graphic organizers in comparison to routine social studies instruction in developing comprehension of social studies textbook content with sixth-grade students as measured by comprehension quizzes?

Scored comprehension quizzes

  Multiple-choice questions   T-tests comparing

    – percentage correct   intervention and comparison

  Essay questions- rubric score   groups

2. How do students in the rhetorical patterns/graphic organizer group and the routine social studies instruction group respond in think-aloud tasks with social studies and health texts?

   Coded think-aloud responses   Analyzed for patterns and

                 themes

_____

Summary

My study examined the effect of teaching sixth-grade students to construct graphic organizers using rhetorical patterns from the social studies text on their ability to comprehend the content in that text. The design was a pretest-posttest two group design with the rhetorical pattern/graphic organizer intervention being the independent variable and scores on the graphic organizers, written summaries, and comprehension quizzes as the dependent variable. The participants were sixth-grade students and social studies teachers in four middles schools in a central Pennsylvania school district.

Students in the intervention group were given explicit instruction in five rhetorical patterns found in their social studies text. The students constructed graphic organizers using rhetorical patterns and wrote summaries to reflect the content from the passages in their social studies textbook. A gradual release of responsibility model helped the students develop independence in constructing graphic organizers and writing summaries (Pearson & Gallagher, 1983). At the same time, students in the comparison groups engaged in routine social studies instruction. Both comparison and intervention groups studied chapters five and seven in the social text and followed a three-day instructional plan for each chapter subsection.

The students were assessed using three measures. They completed a pretest and posttest in which they had to construct a graphic organizer and write a summary for a social studies text passage. Students took three comprehension quizzes consisting of multiple-choice and essay questions requiring recall of information. Also, a random sample of intervention and comparison group students completed think-aloud tasks where

they were asked to construct a graphic organizer for both a social studies text passage and a health text passage.

A mixed analysis of variance (ANOVA) was used to analyze pretest and posttest data from the graphic organizers and written summaries. T-tests were conducted to compare the performance of comparison and intervention groups on the comprehension quizzes. Data from observations were analyzed to identify the characteristics and themes of routine social studies instruction. The think-aloud data was analyzed to identify patterns in student thinking in the process of constructing the graphic organizers and to determine if students transferred the rhetorical pattern/graphic organizer strategy to text from a domain other than the one in which it was introduced. I present the results from the study in chapters 4 and 5. In chapter 4, I focus on the instruction provided by teachers prior to the implementation of the intervention and, in the case of the intervention teachers, how their instruction changed as they provided instruction in identifying rhetorical patterns, constructing graphic organizers, and writing summaries. In chapter 5, I focus on the impact of the intervention on the students as evidenced by descriptive statistical analysis and student work samples.

CHAPTER 4

RESULTS: FOCUS ON TEACHERS

Introduction

Since this study examined the potential benefits of an instructional intervention in which students were taught to identify rhetorical patterns and then construct graphic organizers to reflect the organization the author used to organize the content, I believed that understanding the instruction provided by the teachers in both comparison and intervention groups was critical to understanding the impact of the intervention. In this chapter, I begin by describing what routine social studies instruction looked like in the four classrooms prior to the start of the intervention. In addition to describing their instruction, I focus on how each teacher used the textbook and graphic organizers as these two parts of instruction were particularly pertinent to my study. In the second half of the chapter, I describe the instruction of the intervention teachers as well as review the ongoing instruction provided by the comparison group teachers. These descriptions illustrate the differences between routine social studies instruction and the rhetorical pattern/graphic organizer intervention. The impact of such instruction on student comprehension of social studies text was the focus of the study.

Observational Data Collection Procedures

In order to define what constituted routine social studies instruction in the classrooms, a series of observations were conducted prior to the start of the intervention. The four participating teachers were observed once a week over six weeks. A total of 24 observations were completed. (One teacher was absent for her final scheduled observation and one teacher was observed seven times because one of the observations

occurred when a test was being given and the observer returned during another class when regular instruction was taking place.)

A trained observer and I recorded three types of activities during the 40-43 minute class periods. (Due to scheduling, the specific minutes per class period varied from building to building.) The three types of activities were instructional activities, teacher actions, and student actions. An entry for each of these categories was made every three minutes. A total of 978 minutes were observed.

The instructional activities, teacher actions, and student actions were coded. Using the constant comparative method (Glaser & Strauss, 1967), the codes were adjusted and refined. Inter-rater reliability was completed by the trained observer and a level of 88.2 % agreement was established for instructional activities, 67.1 % for teacher actions, and 87.0 % for student actions. Two issues affected the inter-rater reliability level for teacher actions. First, the teachers frequently engaged in more than one action during a three minute span. For example, one teacher asked students questions and explained a concept. Therefore, these actions could have been coded two different ways. We resolved these differences by identifying the action on which the teacher appeared to spend the most time. Second, in our discussions the observer and I realized that we did not interpret the "Teacher Explanation" code and the "Teacher Instruction" code the same way. The code "Teacher Instruction" was intended to identify when the teacher was giving instructions about completing a task. The observer recognized that she coded some items as "Teacher Instruction" because the teachers were teaching or "instructing" new concepts. After these discussions, we were able to reach 100% agreement in any

differences we had in coding. Descriptions of the codes for instructional activities, teacher actions, and student actions can be found in Appendix M.

Description of Routine Social Studies Instruction

In the next section, a detailed description is given of how each teacher, Mr. Mason, Mrs. Varsho, Mrs. Bystrom, and Mrs. Hanna (all pseudonyms) provided social studies instruction to his or her students. At the end of this section, I outline trends or patterns that were evident in the classes of all four teachers and, therefore, provide insight into what constituted routine social studies instruction.

Before describing the social studies instruction provided by these classroom teachers, it is important to explain that all teachers in the district were required to use the Learning-Focused school model developed by Drs. Max and Julia Thompson (2005). The Learning-Focused School model is an education improvement model that assists schools in using best educational practices to increase learning and achievement. The model helps teachers to identify key learning concepts and unit essential questions which are then parsed into individual acquisition lessons. The acquisition lessons consist of a Lesson Essential Question, Activating Strategy, Teaching Strategies, and Summarizing or EATS. The purpose of the LEQ is to clearly identify the focus of the lesson. Teachers can evaluate both their teaching and student learning based on students' ability to respond to the LEQ. The model emphasizes the use of collaborative pairs, guided practice that is distributed throughout the lesson, and graphic organizers as critical teaching strategies.

In the training manual, Thompson and Thompson (2005) explain that graphic organizers facilitate comprehension by organizing ideas, building connections or identifying relationships, and chunking information to help with memory. They also

maintain that graphic organizers can help students recognize text structures such as compare/contrast, cause/effect, and problem solution. The training manuals provided some graphic organizers for teachers to use. Two examples of these graphic organizers are in Figures 5 and 6.

Figure 5. Details graphic organizer from Learning-Focused Strategies Notebook.

DETAILS (Literary Element)
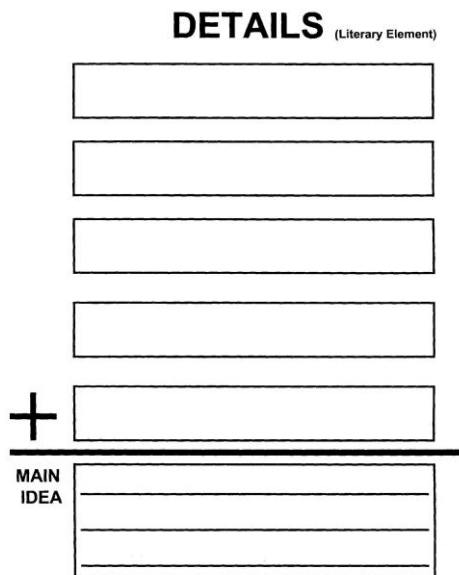
Figure 6. Organizational graphic organizer from Learning-Focused Strategies Notebook.

Organizational Graphic Organizer (Classifying / Categorizing)
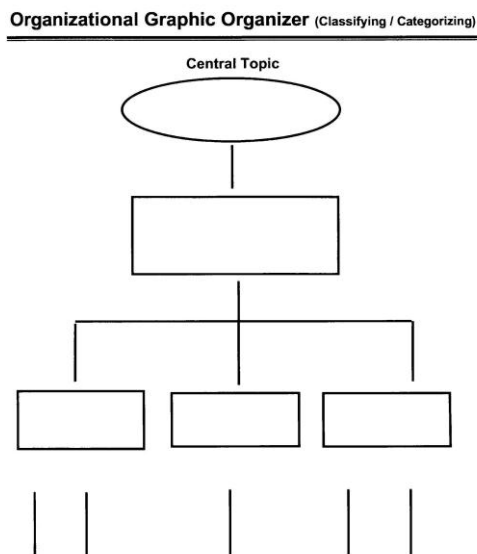
Teachers were not required to use specific graphic organizers nor were they provided with graphic organizers for their lessons. The decision as to what graphic organizers were used, the frequency of their use, and how they were used was made by individual teachers.

Teachers in the district, including the four teachers who participated in the study, received at least three days of training in the Learning-Focused Schools model and began implementing the model in 2006.

<div align="center">Mr. Mason</div>

Mr. Mason taught in School C where, as stated in chapter 3, approximately half of the students received free and reduced lunch and slightly more than half of the students scored proficient on the state assessment in reading in 2009. Mr. Mason taught four sixth-grade social studies classes each day in addition to teaching one period of writing.

Description of Classroom and Approach to Classroom Management.

Mr. Mason's classroom was set up in rows of desks facing the front of the classroom. Across the front of the room were Mr. Mason's desk, computer, and tables where he kept papers and other materials he would be using for his classes. Mr. Mason would also sit at the tables in the front of the classroom to provide help to students who needed it or talk to students about work he was looking at or correcting. Mr. Mason had some social studies-related posters around the room as well as sports posters for teams he supported. On the side of the classroom were whiteboards where Mr. Mason listed the Lesson Essential Questions and Lesson Essential Question answers for the content he was teaching.

Throughout the observations it was noted that Mr. Mason generally interacted positively with his students. He might "pick on" students in fun. Since Mr. Mason was into sports one day he was teasing a student about the World Series (which was going on at the time). However, he maintained control of all that occurred in the classroom. For example, at the beginning of the first observation Mr. Mason expressed his discontent with their behavior the previous Friday when the students had a substitute. As a result the students were told that this would be a "quiet" class period. In another observation, Mr. Mason told the students he would reduce the number of facts they were required to write during a video if they paid attention and listened to the video.

Reflections on Observations

As I reviewed the observation data, I looked specifically at how Mr. Mason used the textbook in his social studies instruction and the role of graphic organizers in that instruction.

Use of the textbook. One way Mr. Mason used the textbook was as a source of facts and information. For example, during the second observation (10/26/09), the students were given a study guide to complete. The study guide consisted of 47 fill-in-the-blank content-related statements that were either copied directly from the textbook or modified slightly. The first page of the study guide is displayed in Figure 7.

Figure 7. Study guide for chapter four, lesson one on Canada.

Name_____ Period _____ Chapter 4 Lesson 1

1. Canada is the world's _____ - largest country in size, but more than 30 other countries have more people.

2. Much of _____ Canada is so cold that few people choose to live there.

The Physical Regions of Canada
3. At least 1 million _____ and lakes lie within Canada.

4. The rich and varied land can be divided into seven _____ regions.
   a. C_____
   b. S_____
   c. A_____
   d. I_____
   e. W_____
   f. H_____
   g. A_____

5. Because of the lack of soil, very few people live in the _____ region.

6. Canada's smallest region-_____

7. Along the coast of the Appalachian region are underwater mountains that rise above sea level to form large islands. One of these is _____.

8. The southern part of the Interior Plains is dotted with prairies and farms. A prairie is a large area of _____ land covered by grasses and wildflowers but few _____.

9. The Western Mountains regions is known for its high mountains, forests, mineral resources, _____, and wildlife.

10. The Hudson Bay region is mostly made up of _____.

11. In the Arctic Islands region, it is too cold for trees to grow. The land is mainly _____, a large, flat plain of frozen ground.

Canada's Economic Regions
12. Canada can be divided into _____ economic regions.

13. The economic regions are groups of the nation's political subregions- 10 _____ and 3 _____.

14. _____ rule themselves much like the states in the United States. Territories do not have the same self_____ as the provinces.

15. Maritime provinces: N_____, P_____,
    N_____, N_____.

The students completed the study guide by filling in the correct word/s. In observation four (11/9/09), Mr. Mason reviewed the answers on a study guide the students had completed on a different lesson in the text. He referred to question 20 which asked the students to give five facts about the French and Indian War and told students they would need this information in the future. I concluded from this comment that a question about the French and Indian War similar to the one on the study guide would be on a future exam.

Mr. Mason also used the text when students copied information from the maps in the text to create their own maps of geographic areas they were studying. In observation one (10/19/09) and six (11/24/09), students used maps in the text to fill in their own outline maps of Canada and Central America.

Mr. Mason used the textbook as a source of homework assignments. On two occasions, Mr. Mason gave an assignment of defining vocabulary words from the textbook. The words to be defined were from a sidebar that highlighted vocabulary words pertinent to the chapter or were words chosen by Mr. Mason. For homework, Mr. Mason also had students answer questions that were found at the end of each lesson in the text. For example, at the end of the fourth observation (11/9/09), the students were assigned questions one (In what ways is Canada's government similar to the government of the United States?), four (Why do Canadian citizens honor the monarch of Britain?), six (What unites and what separates Canada's English-speaking people and French-speaking people?), and seven (How is the role of the Canadian prime minister the same as that of the President of the United States? How are the two positions different?) from page 153 in the chapter on Canada.

Mr. Mason used the text to facilitate his explanation of content. Mr. Mason exposed the students to content in the text by having individual students read portions of the text while the rest of the class was to follow along. He would stop periodically to explain concepts that were in the text that were read by the student. Here is a specific excerpt from my field notes of how reading from the text was carried out in the classroom:

> Mr. Mason had students turn to pages 148 and 149 and asked for a volunteer to read the section aloud. The student who read aloud read rapidly, softly, and moved in her seat the entire time. I was sitting behind her and could not understand her and could barely hear her. She then had the option to continue reading or call on someone else. She kept on. (11/4/09)

While the student was reading, the other students appeared to be listening and following along in their books. Mr. Mason then pointed out three things the students would need to know from the text that had just been read to them. In what appeared to be a preview of the next chapter they would be studying in class, Mr. Mason scanned the text pointing out specific items to students. Here is an excerpt from the field notes:

> Mr. Mason had the students look at pages 194 and 195 in their textbook. He asked a question about plate tectonics and proceeded to explain what plate tectonics were, what happens with the plates, and showed the plates in the oceans. He continued by explaining the ring of fire and also referred to the San Andreas Fault in California. He had the students flip through the chapter and pointed out specific sections on Central America. He then had the students return to page 194 and asked what the main idea would be for this page. He asked a student to read page 194 aloud. He referred to the map and pointed out where Central America is on the map and then asked someone else to read. Before the student read, he asked the students to look at the picture on pages 192 and 193 which showed islands in the French West Indies. Mr. Mason proceeded to describe what Central America and the Caribbean is like based on the picture. The student then continued to read page 194. (Observation 3, 11/17/09)

During this lesson, student engagement involved responding to questions that Mr. Mason asked about specific aspects of the text, listening to the student read, and looking at the text.

Use of graphic organizers. In the six observations of Mr. Mason's instruction, he used graphic organizers two times. In the first instance, Mr. Mason sketched a diagram

on the board as he was explaining the differences between the Canadian government and the United States government. In the next lesson, Mr. Mason had the students make a double T chart. In the first column, the students wrote three statements about the Canadian government and in the second column they indicated whether they thought those statements were true or false. Then after the students read the text, they indicated in the third column whether or not each statement was true or false. At the end of the first observation, Mr. Mason recalled that I was interested in graphic organizers and pointed out the graphic organizer on the side board to the observer. The graphic organizer as copied by the observer is displayed in Figure 8.

Figure 8. Physical web displayed on Mr. Mason's whiteboard.
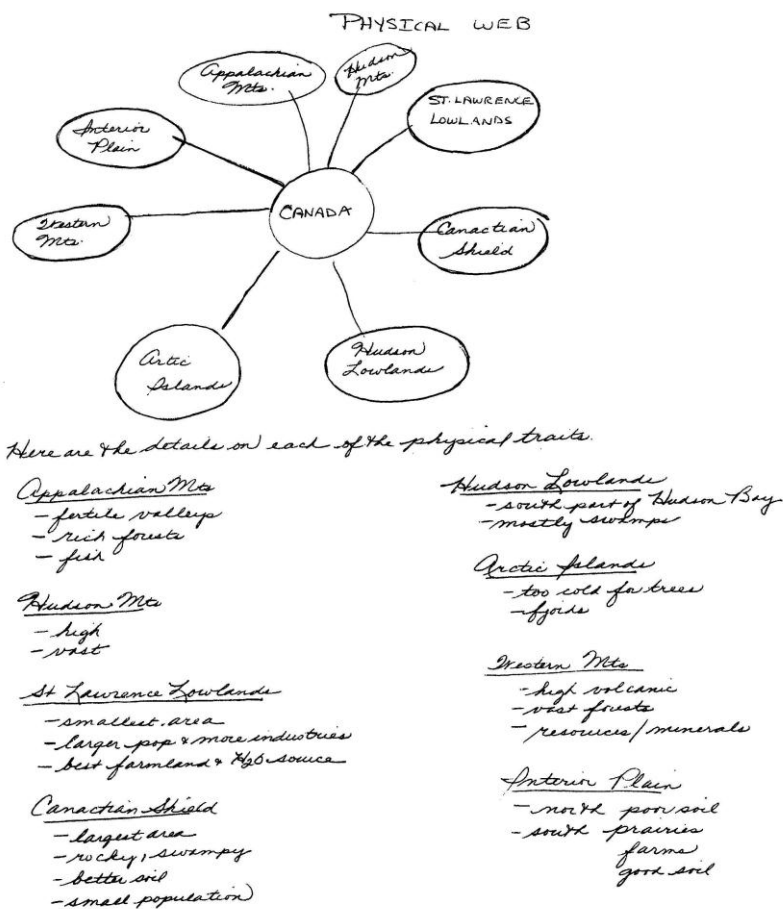
Mr. Mason did not say whether he created the graphic organizer, if the students

contributed to the construction, or if the students were required to copy the graphic

organizer into their notes. No reference was made to the graphic organizer in that day's

lesson or in other lessons.

   Conclusions. In social studies instruction, Mr. Mason used the textbook as a

means to identify facts and information he wanted students to learn. He also used the text

to provide content for lectures and explanation of content. Students used the text when

they filled in study guides, made maps, listened to students read, or followed Mr.

Mason's lectures or explanations using the text. Mr. Mason made limited use of graphic

organizers. There was little or no evidence of students copying or filling in graphic

organizers.

   Interestingly, Mr. Mason's approach to applying the Learning- Focused School

model in his classroom was very similar to his overall approach to instruction. Similar to

the way he had students fill in study guides to highlight information they needed to learn,

he had them copy Lesson Essential Questions and then fill in missing words to complete

the answers. Here is an example:

   LEQ # 5 (about Canada)

   How does Canada's government work?

   Answer:

   Canada's government words by <u>parliamentary</u> <u>democracy</u> where citizens vote for

   <u>parliament</u> and parliament's <u>majority</u> appoint the <u>prime</u> <u>minister</u>.

The students copied the question and answer, filling in the blanks with the appropriate

words. The LEQs did identify the focus of instruction but were not used to determine the

degree to which students understood the content. The answers to the questions could be memorized like much of the information Mr. Mason presented during instruction. Also, there was little evidence of summarization at the end of the lesson. Summarization, according to the Learning-Focused Model, is to be used to evaluate student understanding of the Lesson Essential Question.

<div align="center">Mrs. Varsho</div>

Mrs. Varsho taught in School D where, as stated in chapter 3, around 12% of its students received free and reduced lunch and 77% of the students scored proficient on the state assessment in reading in 2009. Mrs. Varsho taught three sixth-grade social studies classes and two periods of sixth-grade language arts each day.

Description of Classroom and Approach to Classroom Management

Mrs. Varsho's classroom was long and narrow with desks set up in rows facing the front of the classroom. Mrs. Varsho had her desk in the front right of the classroom. The left side of the room had shelves below the windows where Mrs. Varsho kept books and materials. On the right side of the room was a white board. She had content-related posters and information on the walls.

Mrs. Varsho was organized and structured in her classroom. As the students entered the class, she typically gave the students an activity to do, provided specific directions about what they needed to have out to be prepared for the class, or outlined what they would be doing in class that day. For example, one day the students had to complete a *Quickwrite* where they answered the questions "What does freedom mean to you? How is it part of your life?" as soon as they entered the classroom. Students shared

their responses with a partner before sharing them with the class and the activity led into a lesson on freedom in the United States.

Mrs. Varsho was focused and engaged during instruction. She frequently was asking questions and fielding student responses about new content, giving instructions about how to complete a task, or circulating and assisting as students were completing a task. She gave students many opportunities to interact with new information she was presenting both individually as well as with partners. For example, if she gave the students a graphic organizer to fill out, she often allowed the students to work together with a partner as they read the book to locate the information they needed.

Reflections on Observations

As I reviewed the observation data, I looked specifically at how Mrs. Varsho used the textbook in her social studies instruction and the role of graphic organizers in that instruction.

Use of the textbook. Mrs. Varsho used the text to highlight information that was the focus of instruction on a particular day. For example, in observation one (10/19/09), the students read a subsection in the text called "A Mosaic of People" on pages 114-115. They used the information from this section to fill in a Frayer graphic organizer on immigrants (Klausmeier, Ghatala, & Frayer, 1974). See Figure 9.

Figure 9. Immigrant Frayer graphic organizer.

Frayer

Definition   Characteristics

Immigrant

Examples   I Think
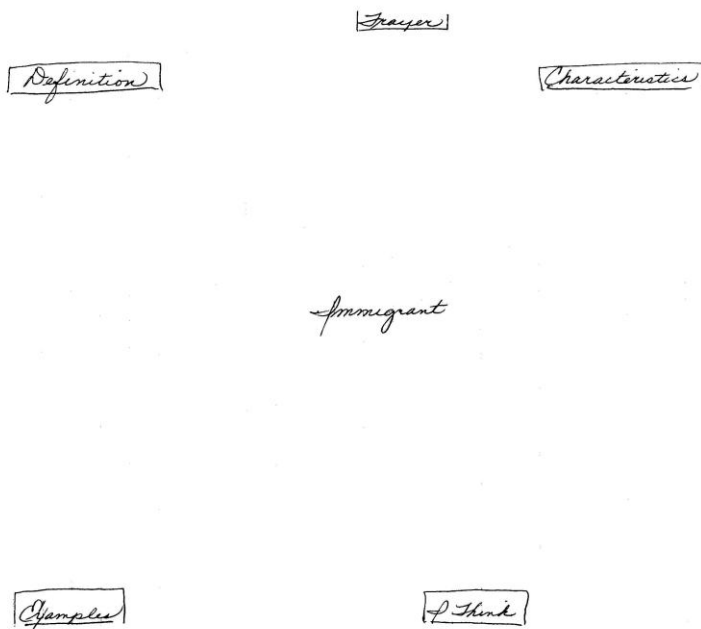
In observation two when the class was discussing the economy of the United States, Mrs. Varsho had the students turn to page 125 in the text and find the paragraph that refers to the United States being an economic superpower and, specifically, to find the sentence that explained a market economy. She also had them turn to page 126 and find the definition of standard of living. She then introduced the concept of international trade. In many cases, the information Mrs. Varsho was presenting was represented on a graphic organizer. Some of the information about the economy the students were locating in the text was used to complete the graphic organizer shown in Figure 10.

Figure 10. Let Freedom Ring! graphic organizer.
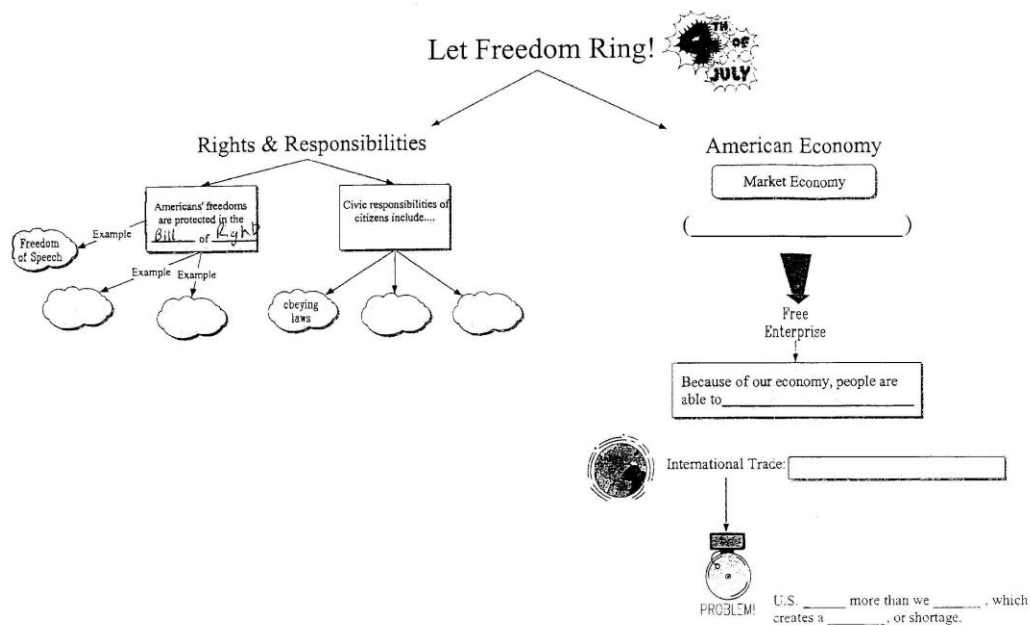
During observation five (11/18/09), the students read a subsection of the text called

Canada's Economic Regions and filled in the graphic organizer in Figure 11. The

students were to list the main economic activities and geography including location and

resources.

Figure 11. Canada's economy graphic organizer.
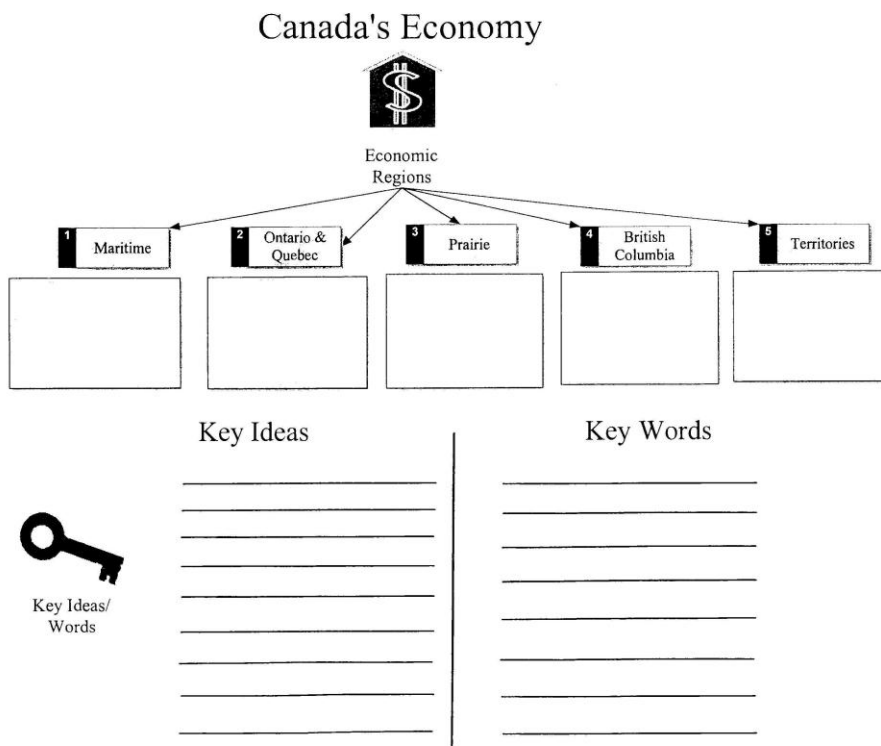
In two observations (10/19/09 and 11/18/09) where students were to read longer sections

of text (pages 114-115 and pages 136-139), Mrs. Varsho had them work in pairs to read

the text and complete the graphic organizers. She may have felt that using this

cooperative approach provided support for less-able readers who might have difficulty

reading the textbook.

Mrs. Varsho also used the text to teach reading-related skills. In observation three

(11/2/09), she taught a lesson on point of view. The point of view lesson was a reading

skill targeted in the textbook on pages 120-121 with the heading *Skills: Reading*. Other

reading skills targeted in the textbook included summarizing, cause and effect, making

inferences, and drawing conclusions. Mrs. Varsho had students read pages 120 and 121

where there was an explanation of why point of view is important, three steps to help

determine a person's point of view, and then opportunities to practice and apply the

reading skill. Mrs. Varsho reviewed Martin Luther King's *I Have a Dream* speech which

is referenced on the page. She reviewed the three steps to determining a point of view and

then the students completed a worksheet where they practiced identifying point of view.

   Use of graphic organizers. Mrs. Varsho used graphic organizers in every

observation. The graphic organizers were teacher-made and had spaces that needed to be

completed. As Mrs. Varsho was introducing the content that was the focus of the graphic

organizer, students would fill in the spaces with the appropriate information. Mrs. Varsho

seemed to use the graphic organizers to identify key ideas from the text and display that

information in a way that would be easier for students to learn. For example, the graphic

organizer in Figure 10 displays the key ideas in two subsections of the text called *An*

Economic Superpower and *A Dynamic Economy*. The information used to complete the

graphic organizer in Figure 12 came from the subsections titled: *American Democracy,*

Rights and Responsibilities, and *An Economic Superpower*.

Figure 12. Why does the U.S. represent freedom? graphic organizer.
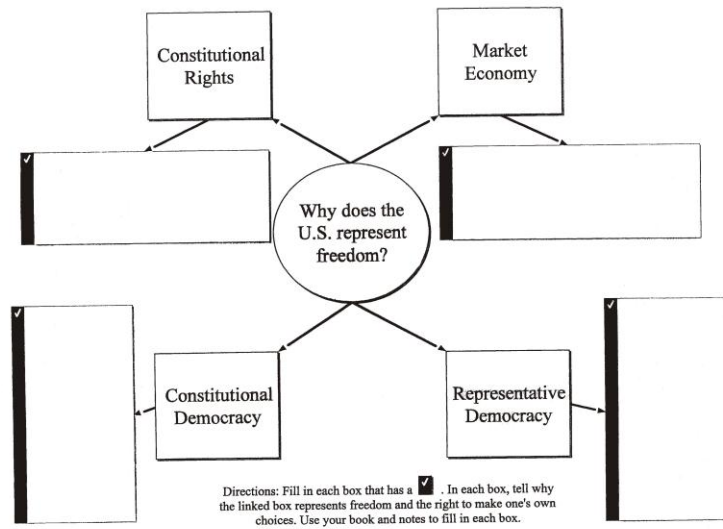
During the test review session in observation three, Mrs. Varsho made an interesting comment to her students about the graphic organizers and the study guide (Figure 13) they were using to prepare for the test.

Figure 13. Social studies study guide.

Social Studies Study Guide
CHAPTER 3 – UNITED STATES

1. The _____ _____ of the United States has many of the country's largest **CITIES**. This area is the **smallest** in size but has a **high population density.**

2. The Rocky Mountains are a key land features in this region: _____.

3. Warm, long, rainy summers make the _____ an agricultural region.

4. _____ _____ landed in **San Salvador**. His discovery OPENED the Americans to **settlement from places in Europe such as England, France, and Spain.**

5. On **July** _____, **1776** the colonies declared their _____ from the British government. Therefore July 4 became America's **first national holiday.**

6. **Colonists in North America** didn't like the British idea of _____ **WITHOUT representation**. They didn't like these high British taxes on their goods, so this caused some problems.

7. Our **Constitution** is our **written** _____ **of government.**

8. The **Bill of Rights** guarantees our _____.

9. The system of **CHECKS AND BALANCES** in our **Constitution** makes sure that all _____ branches of government have **EQUAL powers.**

10. In a **market economy**, people have the freedom to choose their own _____, businesses can set their own _____, and people have the freedom to decide how to spend their _____.

My field notes said, "She then encouraged the students to transfer information from their graphic organizer to their study guide to make it more complete" (Observation 3, 11/2/09). She told the students that the information would help them answer a particular essay question on the test. Mrs. Varsho was telling the students to transfer information from the graphic organizer which was displayed in two-dimensional form to the study

guide where the information was displayed linearly. From this comment, I assumed that Mrs. Varsho felt the students needed all the information they were responsible to learn for the test on one form and that, despite the fact that graphic organizers show relationships between ideas, the study guide was the best tool for students to use as they prepared for the test.

Conclusions. Mrs. Varsho chose specific passages in the text to support the content she was teaching to her students. She had them read paragraphs or sentences to highlight content. When she wanted students to read longer passages of text, she had them work in pairs which may have provided support for less-able readers. Mrs. Varsho regularly used teacher-constructed graphic organizers to communicate content she wanted students to learn. By reading the textbook and engaging in question and answer sessions about the content, the students would fill in the graphic organizers.

Mrs. Varsho made an interesting comment during observation four. My field notes said, "graphic organizers help but if you can't figure out the reading they (the graphic organizers) aren't so valuable" (11/10/09). Mrs. Varsho recognized that graphic organizers were helpful but only if the students were able to read and navigate the text to find the information to fill in the graphic organizer.

Mrs. Varsho's use of graphic organizers is an important element in the Learning-Focused Schools model. The observation data did not provide much evidence that Mrs. Varsho used Lesson Essential Questions nor had students engage in summarization activities.

Mrs. Bystrom

Mrs. Bystrom taught in School A where, as stated in chapter 3, approximately 21% of the students received free and reduced lunch and 74% of the students scored proficient on the state assessment in reading in 2009. Mrs. Bystrom taught three sixth-grade social studies classes each day and language arts for two periods.

Description of Classroom and Approach to Classroom Management

In Mrs. Bystrom's classroom, the desks were in rows with the teacher's desk being in the front left of the room. Mrs. Bystrom also had a table in the front of the room where she worked with small groups of students or put materials if necessary. Her room had bulletin boards and other materials on the walls related to the topics or subjects being covered in social studies or language arts.

Mrs. Bystrom instructed in a well-organized yet pleasant way. She was conscious about the limited time she had during the class period so she tried to complete attendance quickly and have students prepared to begin class. She greeted her students after they arrived and interacted with them in a positive ways. She was also firm with students in a fair way. For example, one day the students were working in pairs. Their talking got a little loud and she gave them "Strike one" to warn them about the noise. The students quieted down and no more warnings were needed during the class period (11/4/09).

Reflections on Observations

As I reviewed the observation data, I looked specifically at how Mrs. Bystrom used the textbook in her social studies instruction and the role of graphic organizers in that instruction.

Use of the textbook. Mrs. Bystrom's made limited use of the textbook during the observations. In the seven observations, the students used the textbook twice in class and once for homework. In observation two (10/23/09), Mrs. Bystrom began instruction by reviewing economic ideas such as gross domestic product, developing countries, three types of economies, and four types of industries using power point. Mrs. Bystrom explained the four types of industries (primary, secondary, tertiary, quaternary) using descriptions that came from the text. As Mrs. Bystrom was explaining the types of industries, students were referring to the pictures for each industry type in the textbook.

During the fourth observation (11/4/09), Mrs. Bystrom had the students open their textbooks to page 106 which was a section called *Native Americans and Europeans*. She explained that they would answer the LEQs they had written in their notebooks. The Lesson Essential Questions were *Tell me about the ethnic groups that settled the United States*. and *How has the United States become a model for freedom throughout the world?* Mrs. Bystrom stressed that she did not want lists and gave the students some models for what she expected in their responses. She reminded them to use words like constitution, freedom, and representation to respond to the second LEQ. Students used their textbooks to answer the Lesson Essential Questions.

The textbook was used for a homework assignment given at the beginning of observation one (10/21/09).The students had to use the textbook to fill in a sheet which Mrs. Bystrom called "guided notes" (See Figure 14).

Figure 14. Governments and economics guided notes from chapter two, lesson three.

Chapter 2 Lesson 3 Governments and Economics

1. Name the four main governing systems in the world.

    _____   _____

    _____   _____

2. A _____ is a governing system in which the people of the country take part.

3. _____ in a democracy vote and are free to choose their government leaders.

4. _____ _____ is a system in which the ideas and decisions supported by the most people are followed.

5. _____ a freedom.

6. _____ is a governing system in which one person rules and the positions is usually inherited. (king or queen.)

7. _____ is a governing system in which one person claims complete control.

8. An _____ , is a governing system where a group of people who are not elected by the citizens controls the country.

9. An _____ is all the businesses that make one kind of product or provide one kind of service.

10. Name the four kinds of industries in the world and explain each.
    a. _____
    b. _____
    c. _____
    d. _____

11. How are economies around the world measured?

    _____
    _____
    _____

12. What are the three main kinds of economic systems and give a definition of each?
    a. _____
    b. _____
    c. _____

These guided notes resembled the study guides that both Mr. Mason and Mrs. Varsho used in their social studies instruction.

Mrs. Bystrom appeared to rely on other sources of information to present content. For example, in observation three (10/29/09), she had information about types of governments on power point. During the same observation, she showed a video on democracy during which the students recorded notes on a Frayer graphic organizer (Klausmeier, Ghatala, & Frayer, 1974). In observation five (11/9/09), the students had a packet on North America which contained single pages addressing topics such as climate, geography, and resources. Each information page was followed by a page of questions

related to the information presented on the previous page. An example of one information page and question page is presented in Figures 15 and 16.

Figure 15. North America packet information page.

The Continent of North America

North America is the third largest of the seven continents. It includes Canada, the United States, Mexico, Greenland, the countries of Central America, and the West Indies islands.

North America covers over 9,200,000 square miles (23,800,000 sq. km). Together with South America, North America forms the land in what is known as the Western Hemisphere.

North America is bordered on the east by the Atlantic Ocean, on the west by the Pacific Ocean, on the north by the Arctic Ocean and on the south by the Gulf of Mexico. It is separated from South America by the border between Panama and Colombia. Some geographers claim that the Isthmus of Panama actually divides the two continents.

The continent's lowest point is Death Valley, California. It is 282 feet (86 m) below sea level. The highest point is Mount McKinley in Alaska. It is 20,320 feet (6,194 m) above sea level.

The continent has five major regions. The Canadian Shield includes eastern Canada, most of Greenland, and part of the northern United States. Part of the region is frozen wasteland, and other parts contain poor soil and large forests.

A coastal plain covers most of the eastern United States and Mexico. The third region is a narrow strip that contains many hills and the Appalachian Mountains of the United States.

The fourth region includes the central plain extending from southern Canada to Texas. This region includes most of the continent's agricultural lands. It is mainly flat land, but has some hilly regions.

The fifth region is the western part of the continent and includes the western United States and Canada and most of Mexico. This region includes the Rocky Mountains of the United States and Canada and the Sierra Madres of southern California and Mexico.

Major river systems include the Great Lakes and St. Lawrence River, which drain into the northern Atlantic Ocean. The Mississippi and Missouri Rivers drain most of the central United States and part of southern Canada into the Gulf of Mexico. The Mackenzie River, which flows into the Hudson Bay, drains much of western Canada.

Most of North America's lakes are in the northern part of the continent. Lake Superior is the world's largest freshwater lake. Other major lakes include the remainder of the Great Lakes: Erie, Huron, Michigan, and Ontario, as well as Lake Mead on the Colorado River, and the Great Salt Lake in Utah.

Figure 16. North America packet question page.

Exploring North America   The Continent of North America

Name: _____   Date: _____

Questions for Consideration

1. Together, what do North America and South America form?

   _____

2. What is North America's lowest point?

   _____

3. What is North America's highest point?

   _____

4. What major river drains into Hudson Bay?

   _____

5. Name the five "Great Lakes." _____

   _____

Map Project

Using an atlas or globe and the outline map of North America (located on page 4), label the following:

Bodies of Water: **Land Features:**

Arctic Ocean   Appalachian Mountains

Atlantic Ocean   Rocky Mountains

Gulf of Mexico   Sierra Madres

Pacific Ocean

The Great Lakes

The Mississippi River

Hudson Bay

> **DID YOU KNOW?**
>
> North America covers just over 16 percent of the world's surface, yet has only five percent of the world's population.

Mrs. Bystrom may have thought the passages in the packet were easier for students to read than passages in the textbook and, therefore, used them to present content to her students.

Use of graphic organizers. Mrs. Bystrom occasionally used graphic organizers during her instruction. During observation two (10/23/09), she had introduced the four types of industries: primary, secondary, tertiary, and quaternary. Following her explanation, she had students use their knowledge of the types of industries to complete a graphic organizer reflecting the history of a cotton sweatshirt (see Figure 17).

Figure 17. History of cotton sweatshirt graphic organizer.

Chapter 2 Lesson 3 - Economy

Essential Question
- What resources are needed to create a product?
- How do economic systems affect people of the world?

How did Miss Barish get her cotton sweatshirt? Trace the history of the cotton sweatshirt by using words and pictures.

Mrs. Bystrom had had students fill in a Frayer graphic organizer (Klausmeier, Ghatala, & Frayer, 1974) while they watched a video on democracy (see Figure 18).

Figure 18. Democracy graphic organizer.
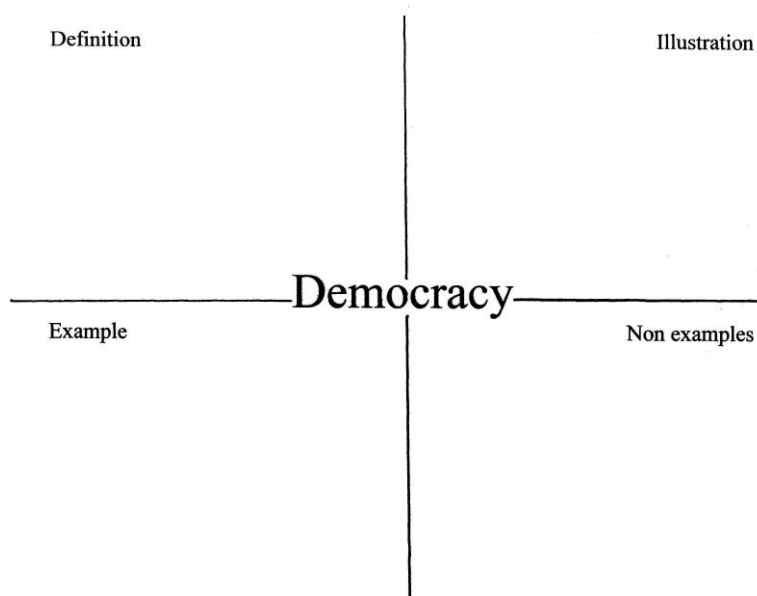
During observation three (10/29/09), the students watched more of the video and continued to add information to their graphic organizer. Students had three other Frayer graphic organizers with the words dictatorship, oligarchy, and monarchy in the middle. These Frayer graphic organizers made it possible for students to write descriptive information about each type of government but did not invite comparisons between the governments such as information presented in matrix form would have done.

Mrs. Bystrom stressed the importance of using these graphic organizers to study for an upcoming quiz. Interestingly, as the students were leaving at the end of the class, Mrs. Bystrom said they should prepare for the quiz by studying the graphic organizers and the anticipatory guide passed out during observation two (sentences with words missing which were filled in after discussion-see Figure 19); not their textbook.

Figure 19. Anticipatory guide.

Name_____ Period _____ Chapter 2 Lesson 3
EQ What resources are needed to make a product?
    How do economic systems affect people of the world?

Directions Read p 70-73 BEFORE beginning. Reread to find the answers to the following questions.

1. The acronym (initials) for gross domestic product._____
2. The name for countries whose economics are still being built. _____
   _____.
3. The 3 main types of economics in the world-
   _____,_____, _____.
4. The 4 main types of industries in the world- _____,
   _____, _____, _____.
5. The freedom of individuals and business in a market economy-
   _____.
6. The type of economy usually found in a democratic country-
   _____.
7. Market economies follow the principle of _____.
8. A measure of a country's economy, tells how well its people live-
   _____.
9. People in a _____ _____ are not free to make their own decisions.
10. The name for raising only enough food for a family to live-
   _____ _____.

Conclusions. Mrs. Bystrom made limited use of the social studies textbook in her instruction. She presented content to her students using sources such as power point, videos, and information packets. In an early meeting about the research study, Mrs. Bystrom said she used the textbook very little for instruction and that comment was supported by these observations. She occasionally used graphic organizers to record content and apply information presented in class.

Mrs. Bystrom did focus student learning by using Lesson Essential Questions. She would refer to the LEQs at the start of lessons and in observation four (11/4/09) had students writing their own responses to two lesson essential questions. She also used summarizing activities such as 3-2-1. A 3-2-1 activity is a summarizing strategy that is recommended as part of the Learning-Focused Schools model (Thompson & Thompson, 2005). The teacher asks the students to write three, two, and one fact/s related to the topic they are studying (ex. Federal Government –Write: 3 ways the system has checks and balances, 2 ways the system affects you, 1 thing you would do to make the system better).

Mrs. Hanna

Mrs. Hanna taught in School B where, as stated in chapter 3, approximately 46% of the students received free and reduced lunch and 52% of the students scored proficient on the state assessment in reading in 2009. Mrs. Hanna taught three sixth-grade social studies classes each day in addition to teaching language arts for two periods.

Description of Classroom and Approach to Classroom Management

In Mrs. Hanna's long narrow classroom, the desks were in rows with the teacher's desk being in the front left of the room. Mrs. Hanna had a few posters and language arts- and social studies-related items hanging in her room.

Before describing Mrs. Hanna's approach to classroom management, I felt it was important to describe my observations of students in the sixth-grade hall as they changed classes. With so many students changing classes at the same time, the noise level was quite high. Students could be heard yelling to each other and laughing as they moved from classroom to classroom and accessed their lockers. That same atmosphere seemed to follow the students as they entered Mrs. Hanna's classroom at the start of class.

Mrs. Hanna had a laid back approach to discipline in her classroom. To many observers, the students in her classroom may have seemed quite unruly. She appeared or chose not to notice that some students were fooling around with their neighbors, talking, drawing, or reading during class time. Mrs. Hanna tended not to intervene for every incident that occurred but needed to "pick her battles" for certain behaviors otherwise she would have spent a large percentage of her instructional time dealing with discipline. She would let the level of student talking and interaction get to a certain level before she insisted that students adjust their behavior.

Mrs. Hanna attempted to get students involved in her instruction by doing hands on activities and leading discussions about issues related to the specific content being covered. The atmosphere in Mrs. Hanna's classroom was very different than the more controlled approaches to management observed in the classrooms of the other three teachers.

Reflections on Observations

As I reviewed the observation data, I looked specifically at how Mrs. Hanna used the textbook in her social studies instruction and the role of graphic organizers in that instruction.

Use of the textbook. Mrs. Hanna used the textbook frequently in her instruction in a variety of ways. In the second observation (10/27/09), Mrs. Hanna had individual students read a sentence or a paragraph on page 108 and then paraphrase the content in their own words. Later on during the class period, she had the students read the subsection called *Forming a More Perfect Union* on pages 109 and 110, list the dates, and describe what happened on those dates. At the end of the class period, she began to list the dates and events on the board.

Prior to observation three (11/2/09), the students had been placed in small groups and were assigned a particular section of text to read and present to the class. At the start of this class period, Mrs. Hanna gave the students a few more minutes to finish their work and then called on one group to give their presentation. Mrs. Hanna told one member of the small group to write while another member presented the information. When the students began having difficulty reading some words in the summary, Mrs. Hanna intervened. She explained how democracy is based on the constitution and then questioned the students in the class about democracy, constitution, and representative democracy. At this point she recognized that two members of the small group were not up front and called on these students to join their group. Mrs. Hanna stood off to the side of the room while the group continued to summarize the role of the local, state, and national governments. A second group got up and one student briefly shared the summary

the group had prepared for the subsection they had been assigned. The student was speaking so softly it was difficult to hear.

Mrs. Hanna made use of the text when she had students complete a Do Now activity at the start of observation five (11/19/09). A *Do Now* activity is used to engage students in learning as soon as they enter the room. The *Do Now* activity may ask students to review something they learned in a previous lesson or ask them to think about a topic that is related to the content to be covered in the lesson that day. Mrs. Hanna had students turn to page 134 and turn the heading *Physical Regions of Canada* into a question. Interestingly, the question the students were to have generated from the heading was never referred to during the remainder of the class period.

Mrs. Hanna read the introductory paragraph in lesson one in the chapter on Canada which was titled *Land and People* and explained why there are so few people when there is so much land in Canada. After the introduction, Mrs. Hanna had individual students read portions of the text and then explained or questioned the students about the content contained in the text. This description is from field notes:

She picked a student to read the next paragraph and another student to read the next paragraph. While these students were reading, some students were listening but others were not. Mrs. Hanna asked the students what two things people looked for to be able to use land for farming. Students responded with soil and water. Mrs. Hanna explained that people don't live in the Canadian Shield because of the cold and the inability to farm the land. As the lesson continued, Mrs. Hanna had individual students reading a section of text and then she explained the content to the students. This sequence occurred five times before Mrs. Hanna asked a

question about why the St. Lawrence region has more people and industries than other regions. She asked for someone to respond who had not yet participated. To introduce the class to new content in the textbook, Mrs. Hanna relied on students who could read the text for the class. Unfortunately, there were students who were not listening or following along as other students were reading and most likely gained very little from the class.

Use of graphic organizers. Mrs. Hanna had the students make two graphic organizers during the observations. The first graphic organizer was made by folding paper in half length wise and then cutting three flaps (See Figure 20).

Figure 20. Three branches of government folded graphic organizer.
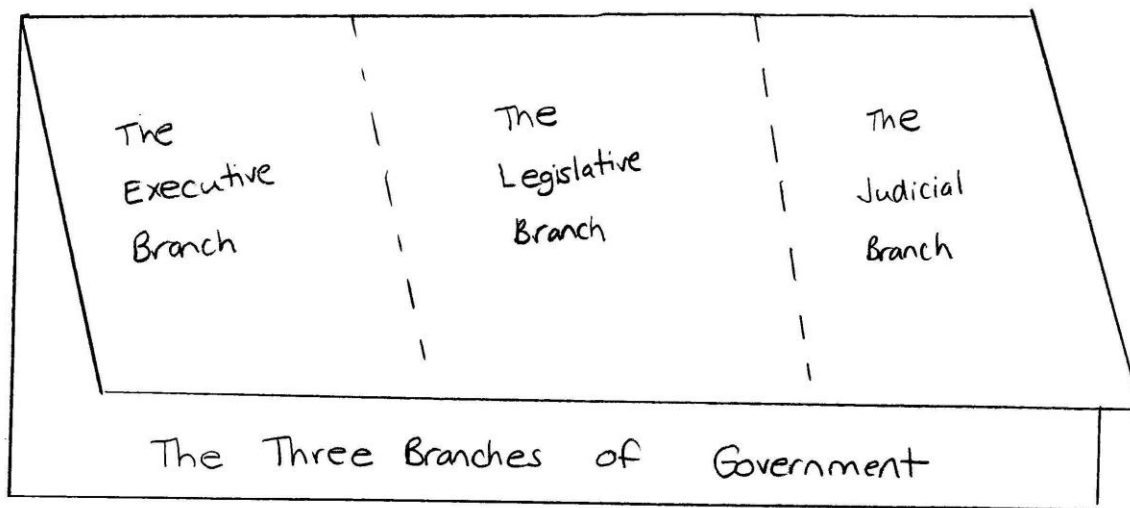
The excerpt from field notes shows how Mrs. Hanna developed the graphic organizer:

The students wrote *The Executive Branch* on the first flap. Mrs. Hanna asked the students to tell what a chief executive does and name the chief executive of our country. She added that the vice president and cabinet are other members of the executive branch. After waiting for students to be quiet, she explained what the cabinet is and that the job of the executive branch was to carry out the laws. She

introduced *The Legislative* Branch and explained who makes up the legislative branch. After the students wrote *The Judicial Branch* on the third flap, Mrs. Hanna asked the students what the word judicial looked like and explained that the Supreme Court interprets the constitution. Under each flap, students wrote descriptive information about each branch. For example, under the legislative branch flap the students wrote *Congress* with two lines coming from the word and then the word *Senate* at the end of one line and *House of Representatives* at the end of the other line. Under that diagram, the students wrote that these groups make the laws. As the class period ended, Mrs. Hanna told the students that this foldable was "our government in a nutshell" and that they would talk more about it the next day. (11/2/09)

A second folded graphic organizer was referenced during the last observation. Mrs. Hanna told the students to get out their graphic organizer on the physical regions of Canada (See Figure 21).

Figure 21. Physical regions of Canada folded graphic organizer.

Physical Regions of Canada	Canadian Shield	St. Lawrence Lowlands	Appalachian
Interior Plains	Western Mountains	Hudson Bay Lowlands	Arctic Islns

The graphic organizer appeared to have been folded by the students to form spaces where they could write information about the different regions. After getting out their graphic organizers, Mrs. Hanna divided the students into groups and each group began making a poster with information about one of the physical regions. It was not clear whether the information for the poster came from the graphic organizer.

Conclusions. Although the text was used frequently during these observations, the students actually did not read much connected text. Students looked at the text to pick out dates, turned a heading into a question, or voluntarily read a paragraph or two prior to the teacher explaining the content. When small groups of students read a longer subsection of the text in order to present a summary to the class, the students had difficulty reading some of the vocabulary and required assistance from the teacher to explain the content.

Mrs. Hanna used graphic organizers twice during the observations. In both cases, the graphic organizers were student-made folded sheets used to record information about a specific topic.

Mrs. Hanna typically displayed a Lesson Essential Question on her front board but did not always reference it as she taught her lesson. She made limited use of graphic organizers and did not seem to use summarizing activities to conclude a lesson.

Conclusions: Routine Social Studies Instruction

In this section, I identify some trends that became evident after analyzing the social studies instruction of the four teachers in the study. First, I discuss the differences and similarities in their approach to social studies instruction and classroom management. I included observations on classroom management because the approach a teacher takes

towards managing student behavior may have an impact on the effectiveness of instruction. Second, I identify patterns that emerged from the observations with regard to textbook use. Third, I discuss the place graphic organizers had in instruction across the four teachers as well as how effectively they were used.

Four Teachers' Approaches to Social Studies Instruction

Based on these observations, Mr. Mason, Mrs. Varsho, Mrs. Bystrom, and Mrs. Hanna had differences in how they approached social studies instruction. Mr. Mason generally provided instruction that asked the students to transfer information from the text to sheets (study guides) or from the board to notebooks. The study guides and scripted answers became the source of information students would study. Classroom management appeared to play a role in how Mr. Mason conducted his instruction. The types of tasks he assigned to students required little interaction between them. When he did allow students to work in pairs, it was as a reward for being quiet. He also reduced the number of items students had to write about the video based on students' behavior while watching it.

Mrs. Varsho presented content to be learned by having students read portions of the text and complete graphic organizers. Students were not expected to fill in the graphic organizer on their own but the ideas were presented through teacher/student question and answer or by students reading short portions of text. Mrs. Varsho was aware that students needed to have study or reading skills as evidenced by her lesson on point of view. Classroom management did not seem to be an issue for Mrs. Varsho so students frequently worked with other students when completing classroom work.

Mrs. Bystrom used lecture, question and answer, and writing as tools to present content to students. She would put content on the power point and present it to the students as she asked them questions to encourage their participation. Students answered LEQ's in notebooks by referring to information in the text or using supplemental materials provided by Mrs. Bystrom. Classroom management issues did not seem to interfere with instruction and students frequently worked in pairs to complete assignments or share information on assignments already completed.

Mrs. Hanna used hands-on activities, discussion, and the textbook to introduce content to the students in her classes. Students acted out a tax collection scenario and made mosaics to illustrate ideas they would be studying or had studied in class. Mrs. Hanna had individual students read the textbook and then explained the content contained there. She raised topics that related to the content being presented and encouraged student interaction in discussing these topics. There were times when the relationship of these topics to the content did not seem to be clearly established. Mrs. Hanna's less-structured environment resulted in what might be considered high noise and activity levels in the classroom.

Mrs. Varsho was the only teacher that referred to content/reading skills to any degree in her instruction. Mrs. Varsho taught a lesson on point of view which was in the social studies text and talked about the importance of taking good notes although there was no explicit instruction in note taking documented during the observations.

Four Teachers' Approaches to Textbook Use

The teachers' differed in how they used the textbook during instruction. Mrs. Bystrom's students used the textbook on only three occasions; they looked at pictures,

they read text to complete a LEQ in their notebooks, and they used the text to do a homework assignment. Mrs. Varsho had students refer to the textbook frequently for such tasks as completing graphic organizers, finding a definition, or reading information to respond to questions she was asking about the content. Mr. Mason and Mrs. Hanna both had individual students read short portions of the text prior to explaining the content contained there.

The common trend that became apparent with regard to textbook use was that not one of the four teachers had all students read lengthy passages in text. Throughout the observations, students' interaction with the textbook consisted of reading short sections of text such as a paragraph, finding dates in a specific section, reading one or two paragraphs aloud to the rest of the class, or referring to sections to answer LEQs or fill in blanks in study guides. In these instances, students were often reading a section for the rest of the class or looking for something specific in the text which typically did not necessitate reading lengthy passages. Teachers may have been hesitant to have students read longer pieces of text because of text difficulty and/or concerns about students' abilities to maintain focus that was needed to comprehend the content in the lengthy passages.

Four Teachers' Approaches to Graphic Organizer Use

The four teachers used graphic organizers to varying degrees. Mrs. Varsho used graphic organizers consistently throughout her instruction. These graphic organizers generally were teacher-constructed and filled in by the students as content was presented. Mr. Mason, Mrs. Bystrom, and Mrs. Hanna made limited use of graphic organizers. Mr. Mason made a Venn diagram to show differences between governments and used a double T chart as an anticipation guide. Mrs. Bystrom had students show the sequence of events in cotton becoming a sweatshirt and used Frayer graphic organizers to define different types of governments. Mrs. Hanna had students make two folded graphic organizers where they listed characteristics of branches of government and the seven physical regions of Canada.

The teachers used these graphic organizers to convey content they wished the students to learn. There was no evidence, however, of teachers explaining how the graphic organizer showed relationship between the ideas contained there. For example, in the graphic organizer in Figure 10, Mrs. Varsho was discussing freedom in the United States. She helped the students fill in the graphic organizer by reviewing the content but there was no documentation of discussing the overall concept that we experience freedom in different ways in our country and this graphic organizer shows two of those ways: rights and responsibilities and economic freedom. In these classrooms, graphic organizers were used to display content but their value as a tool to show relationship and continuity between ideas was not acknowledged.

Teacher Assignment to Comparison or Intervention Groups

As discussed in chapter 3, random assignment of the four participating teachers to comparison and intervention groups was not possible. Schools A and D and Schools B and C were closely matched with regards to socio-economic and achievement factors. The teachers from Schools C and D had requested to be comparison group teachers so their instruction would not change significantly. The teachers in Schools A and B were the intervention group teachers. As a result, intervention teacher Mrs. Bystrom at School A was matched with comparison teacher Mrs. Varsho at School D. Intervention teacher Mrs. Hanna at School B was matched with comparison teacher Mr. Mason at School C.

Based on the observational data collected prior to the study, the teachers were well matched with regards to instructional and classroom management style. Mrs. Bystrom and Mrs. Varsho used instructional time efficiently, interacted and engaged with students, and maintained well-ordered classrooms. While Mrs. Varsho used the textbook and graphic organizers more frequently than Mrs. Bystrom, this factor should actually have strengthened her students' position in comparison to Mrs. Bystrom's students with regard to reading the text and constructing graphic organizers. Mr. Mason's and Mrs. Hanna's instructional approaches were similar as they frequently had individual students reading the text and neither made regular use of graphic organizers. Mrs. Hanna's less-structured classroom environment in comparison to Mr. Mason's well-controlled classroom may have actually made learning the rhetorical pattern/graphic organizer strategy more challenging for her students. As a result of these observations, there is clear evidence that even though the teachers were assigned to comparison or intervention instruction they were well matched. Factors such as lack of textbook and graphic

organizer exposure in Mrs. Bystrom's classes and a loosely-structured environment in Mrs. Hanna's classes may actually have made it more difficult for these students in the intervention groups to learn the rhetorical pattern/graphic organizer strategy.

Observations of Intervention and Comparison Group

Teachers During the Intervention

Both comparison and intervention group teachers were observed after the intervention instruction began. The comparison group teachers, Mr. Mason and Mrs. Varsho, were observed weekly to ensure there were no major changes to their social studies instruction as well as to gather additional data on routine social studies instruction.

The intervention teachers, Mrs. Bystrom and Mrs. Hanna, received intervention training on December 15, 2009. A detailed description of the intervention training is provided in chapter 3. Both teachers were observed to ensure the intervention was being implemented correctly and see the intervention firsthand. Due to schedule and distance between schools, I was only able to observe Mrs. Bystrom five times, with three of these observations occurring on the same day for three different classes. I was, however, able to observe Mrs. Hanna eight times during the intervention implementation. In the next two sections, I present the observation data collected for both the comparison and intervention teachers as the intervention was being implemented.

Comparison Groups

The observations of the comparison group teachers were conducted to ensure that there were no major changes in routine social studies instruction compared to the observations conducted prior to implementation of the intervention. These observations

also provided additional data on routine social studies instruction. As with the pre-intervention observations, I specifically looked at how the teachers used the textbook and graphic organizers in their instruction.

Mrs. Varsho

In the observations conducted prior to the study, Mrs. Varsho's classroom was very structured and organized. Each class period was well planned and students were consistently engaged in learning activities. There were no major changes to Mrs. Varsho's instruction as the study continued. She continued to give the students a variety of tasks that required them to interact with the content being presented. She continued to integrate reading skills into her content instruction. For example, Mrs. Varsho had the students turn to the introductory pages on South America which included an inset highlighting that making inferences would be a targeted reading skill in the chapter. She had the students make inferences about South America when she asked *What can we infer based on the fact that South America is mostly Roman Catholic and Spanish speaking?* She also had the students make an inference about a picture of the statue of Christ overlooking Rio de Janeiro. Another example of integrating reading skills into social studies instruction occurred when she used the reading strategy focus in the text to teach about cause and effect. In a later lesson, she had the students identify the causes and/or effects of events in the history of South America (See Figure 22).

Figure 22. "A Blend of People" cause and effect graphic organizer.

Name_____   Social Studies Ch. 7 Lesson 2

A Blend of People, p. 234-236   *Answers from students*

Cause	Effect
Pope Alexander VI created a demarcation line.	*Portugal land to east Spain got land to west*
The demarcation line was moved.	*Portugal claimed Brazil*
Cabral claimed Brazil for Portugal.	
	Today Brazil has three main ethnic groups-Europeans, Africans, and mixed ancestry.
Portugal established colonies in Brazil.	
	The Inca Empire ended.
Pizarro founded the city of Lima.	
	His job was to enforce Spanish laws and customs.
	There were groups in South America with different levels of importance.

Mrs. Varsho also provided many opportunities for students to interact with content and each other rather than lecturing or having students simply copy notes. For example, one day she gave students a number from one to six and, after they separated into groups according to their number, they completed a Frayer graphic organizer about a vocabulary word to which their group had been assigned (Klausmeier, Ghatala, & Frayer, 1974). In another class, she had students work in groups of two or three to read a section of text and answer the question *How is Mexico's democracy different than ours?* These kinds of short work assignments where students answered questions, filled in graphic

organizers, or defined vocabulary words while working with other students continued to be a regular part of Mrs. Varsho's approach to instruction.

Use of the textbook. The observational data collected during the intervention confirmed that Mrs. Varsho continued to use the textbook as she had in the initial observations. Mrs. Varsho did, however, have the students read longer portions of text than they read in earlier observations. For example, in one lesson (3/9/10) Mrs. Varsho had the students read one entire subsection on the natural resources found in South America to complete a graphic organizer they had copied off the board (see Figure 23).

Figure 23. Graphic organizers copied off the board.
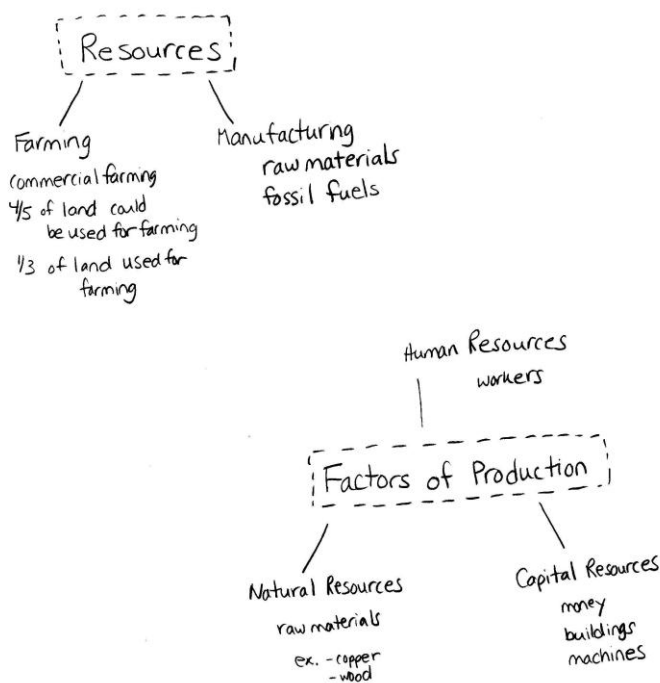
In another lesson (3/22/10), she again had the students read a subsection on ways of life in order to identify the ways people lived in rural and urban areas.

Use of graphic organizers. Mrs. Varsho continued to make regular use of graphic

organizers in her instruction. She had students describe and define physical features and

climate in one graphic organizer as she began the chapter on Mexico (see Figure 24).

Figure 24. Mexico: Landforms and climate and vegetation graphic organizers.
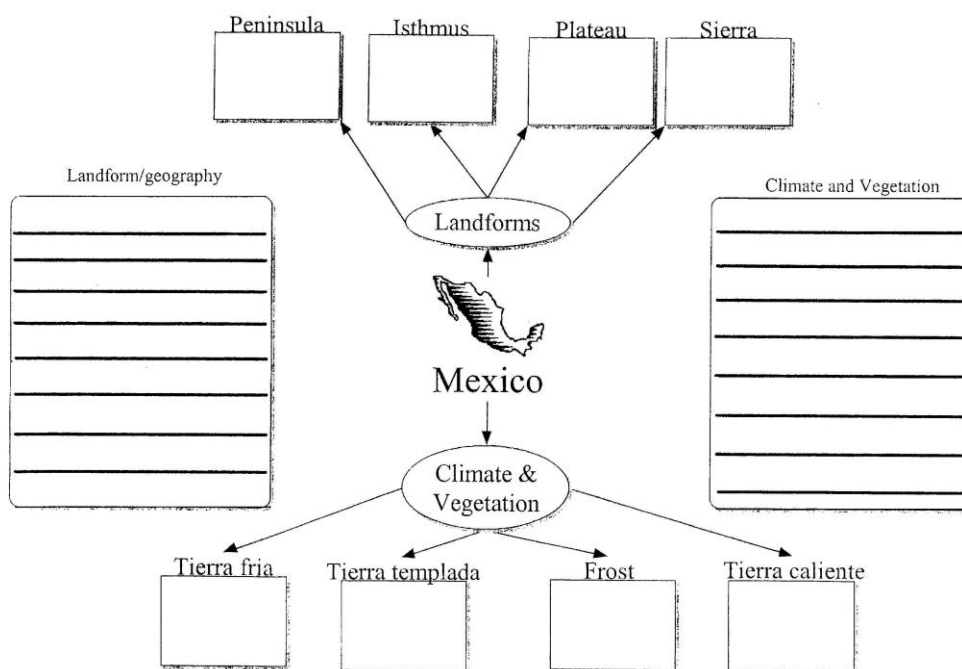
In the computer lab, students researched an ancient civilization from Mexico and

completed the graphic organizer seen in Figure 25.

Figure 25. A day in the life of…graphic organizer.

NAME_____

A Day in the Life of...

Directions: Use your reference materials to take notes on the following aspects of your civilizations.

RELIGION	
FAMILY LIFE	
FOOD	
CLOTHING/ SHELTER	
DAILY ACTIVITIES	

Students filled in key concepts about Mexico's history, government, and economy in the graphic organizers in Figures 26 and 27.

Figure 26. Mexico's history graphic organizer.

Declared freedom in _____.

Two major problems were
left after Spanish rule

1

2

Mexico
experienced many
problems during the
late _____ and
early ____.

Mexican
Revolution
(over
democracy)

Stuff to know!!

Mexico's president _____

Mexico is a _____ with
_____ branches of government.

The 1st president to become a
member of PAN was _____

Eventually,
PRI was
established
which......

Finally,
Constitution of
1917 was written
and...

Figure 27. Mexico's economy graphic organizer.
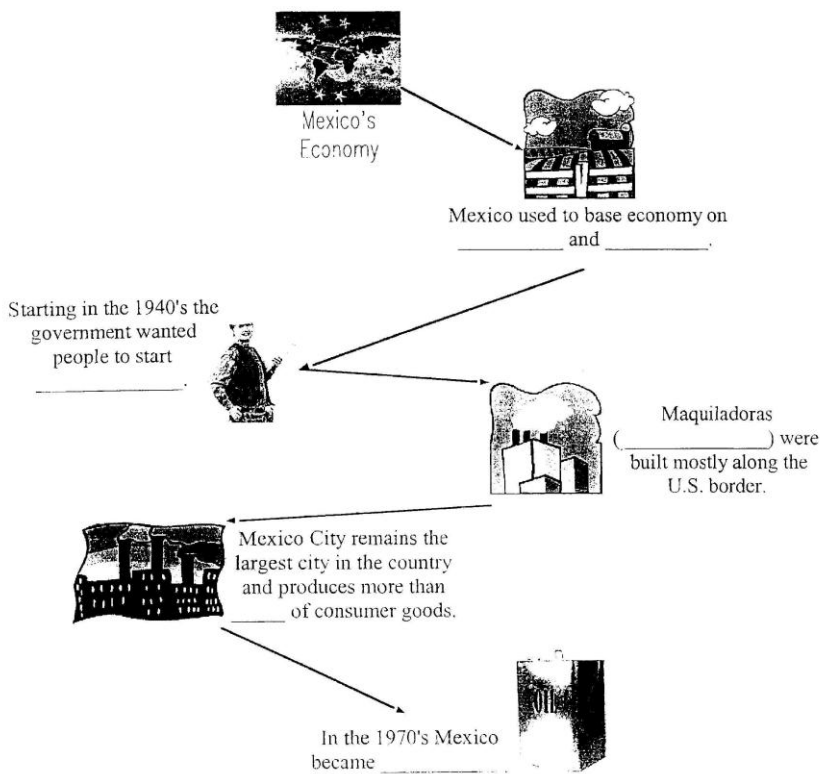
As noted from the observations prior to the start of the study, Mrs. Varsho did not really emphasize relationships between ideas when using graphic organizers. She seemed to use the graphic organizers to present content but not necessarily to show connections between ideas or concepts in that content. Mrs. Varsho had her students research one of the ancient civilizations in Mexico. There was no evidence that she displayed this kind of information in matrix form in order for students to identify similarities and differences between the ancient civilizations.

Mr. Mason

In the observations conducted prior to the study, Mr. Mason relied on the textbook as a source of facts and information and as a way to facilitate lectures and question and answer sessions. His approach did not change a great deal during the

intervention. He did, however, engage in a number of instructional activities that had not been observed prior to the start of the intervention. For example, during class on January 21, 2010 he had students answer two questions about the climate of South America: *What are the two dry areas found in South America?* and *What causes this dryness?* On February 2, 2010 he had the students write three multiple-choice questions and one short answer essay question based on the subsection of text called *The Earliest South Americans*. After students wrote their questions, they exchanged papers with another student and answered the questions that student had written. Also, on February 3, 2010, Mr. Mason reviewed a homework assignment on making inferences.

One reason Mr. Mason may have included some of these activities was because he needed to spend three days on each subsection of text. In discussing this schedule prior to the study, Mr. Mason said that, while he was not used to taking three days for each subsection, he would not have a problem doing that for the research study.

Mr. Mason continued to maintain control over student behavior. For example, on March 8, 2010 the students were completing a map of Mexico. He warned the students that if they talked he would take away points from their grade. One student lost six points during the time the students were working.

Use of the textbook. Except for the activities mentioned above, Mr. Mason continued to use the textbook as he did during the pre-intervention observations. In seven of eleven observations, Mr. Mason had an individual student read text to the rest of the class. Mr. Mason would stop the student and elaborate on the content or engage the class by asking questions in order to explain or further develop the information.

Mr. Mason also used the text when he did a skill lesson called *Read a Map of Cultural Regions* on pages 228-229 in which he discussed whether maps could give more information than political or physical regions. Students also used the text to complete a study guide similar to the one in Figure 7.

Use of graphic organizers. Mr. Mason appeared to use graphic organizers a little more frequently in the observations conducted during the intervention. Again, due to the three-day schedule, Mr. Mason may have felt he had more time to use them. Mr. Mason had students fill in a graphic organizer on South America (see Figures 28) as well as write information on the back (see Figure 29) as the content was introduced over three class periods (1/13, 21, 26/10).

Figure 28. South America graphic organizer.
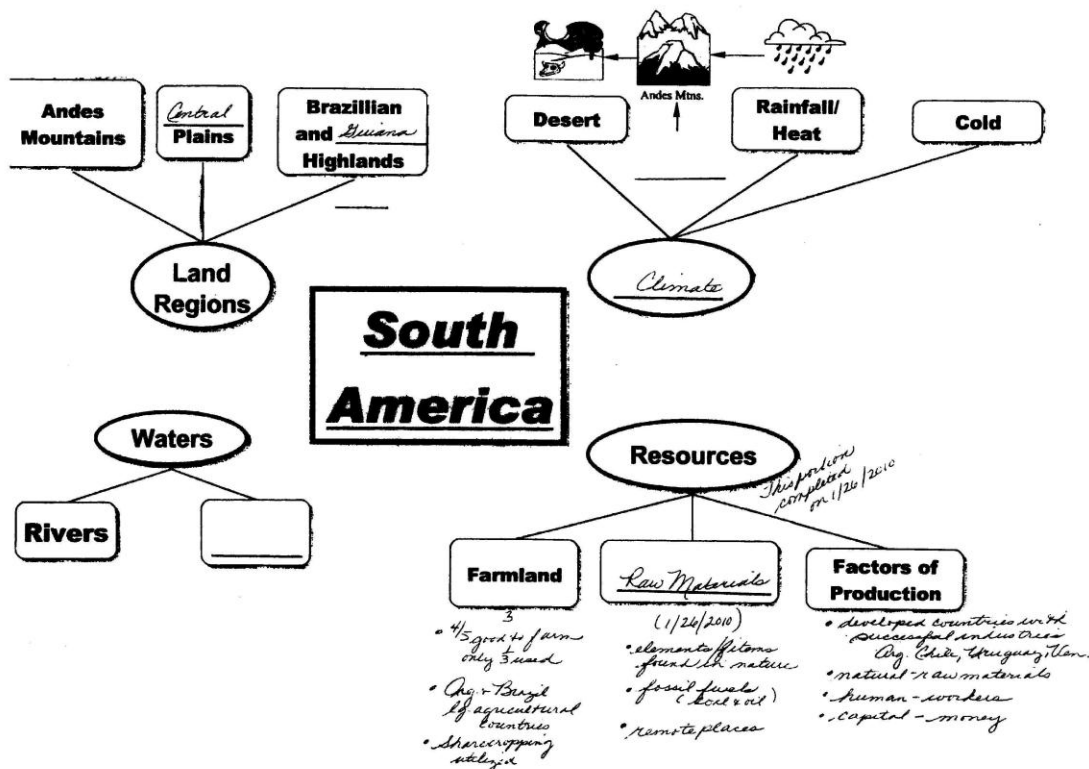
Figure 29. Notes students added to back of South America graphic organizer shown in

Figure 28.

Andes
- largest mt. range - from Venezuela to southern tip
- several ranges of mts. - cordilleras (parallel ranges)
- peaks up to 80,000 ft. - Aconcagua is highest in western Hemisphere
- caused by plate tectonics

Brazilian Highlands
- eastern bulge of the continent
- rounded hills & plateaus
  Matto Groso
- drops sharply into the Atlantic Ocean (escarpment)

Guiana Highlands - Eastern S.A.
- north of the Amazon River
- open grassland with scattered trees

Central Plains
  4 plains make up ¾ of continent
A. llano - rolling grassland
        Colombia / Venezuela
B. selva - jungle / rain forest
C. Grand choco - small trees / shrubs
        Argentina - Bolivia - Paraguay
D. pampas - vast grassland
        Argentina

Also, Mr. Mason had students check the time line shown in Figure 30 as the class was

reading pages 234-235 in the text.

Figure 30. Timeline graphic organizer.

Year	Event
1492	Columbus landed in South America and claimed land for Spain
1493	Pope Alexander settled a dispute on land border – Demarcation line
1494	(Observer did not get this item)
1520	Pizarro arrived in South America – – believed native groups (Inca) had riches and power
1527	Pizarro and followers landed near Tumbes, Peru
1500's	Portuguese explorer Cabral founded Brazil
1530's	Portuguese established colonies in Brazil – commercial farming – enslaved natives and Africans
1531 – 1533	Pizarro traveled and conquered Inca empire – expanded Spanish empire
1535	Pizarro founded Lima, Peru
1600's – 1700's	Lima served as capital for Spanish government Viceroy – select one ruler Social classes established – lasted 300 years – 3 levels based on importance

The timeline had been completed when a substitute was in the classroom and Mr. Mason wanted the students to make sure they had all the necessary information. Mr. Mason compared Simon Bolívar and San Martín using a Venn diagram as shown in Figure 31.

Figure 31. Venn diagram comparing Simón Bolívar and Jose de San Martín.
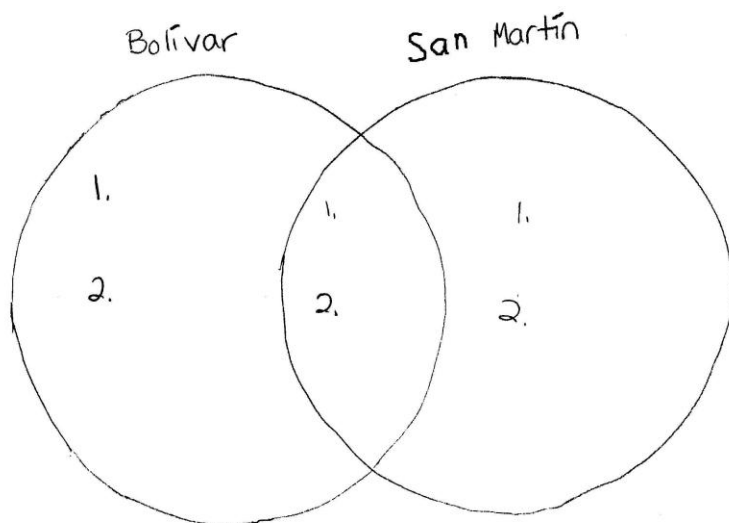
Students had drawn the diagram on the back of a blue homework sheet. It was not clear

whether filling in the graphic organizer was part of the homework assignment. On March

18, 2010, Mr. Mason reviewed information on the Olmecs the students were to have

filled in during the previous day's class on a graphic organizer (see Figure 32). The class

filled in the section on the Mayas while a student read the text and Mr. Mason explained

the content and then the students completed the sections on the Aztecs and the Spanish on

their own during the remainder of the class period.

Figure 32. Early civilizations graphic organizer.

Intervention Groups

Mrs. Hanna

As stated, Mrs. Hanna had a laid back approach to classroom management. She tolerated a great deal of talking and disruptive behavior before intervening. This approach to classroom management was consistent throughout the observations. For example, on February 4, 2010 Mrs. Hanna had to send a student to the office for behavior issues. Before Mrs. Hanna began the lesson, students were talking, making noises, and calling out and she yelled at them for being noisy. After talking to someone in the office about the behavioral issue, she began the lesson. The office called back and, while Mrs. Hanna was on the phone, some students were talking loudly and other students were telling them

to be quiet while Mrs. Hanna was on the phone. Once Mrs. Hanna dealt with the office problem she was able to continue the lesson with minimal interruptions by students.

As the rhetorical pattern/graphic organizer intervention progressed, students began to complete both graphic organizers and summaries cooperatively and independently. I observed that, once they settled into the task of constructing graphic organizers or writing summaries, most students were focused on the task and able to be productive.

Use of the textbook. The first day of each three-day cycle during the intervention consisted of the teacher and students reading a specific subsection in the text and the teacher discussing, clarifying and explaining content to the students. During the observation on February 4, 2010, Mrs. Hanna was introducing the subsection *Mexico Today* on page 187 of the text. She provided the students with some background on present-day Mexico and began reading the text to the students. To facilitate student engagement as she was reading the text, she would stop and have students supply the next word in the passage. In contrast to having individual students read portions of the text, this approach encouraged students to be engaged but provided support for those students who might have difficulty reading the text. Mrs. Hanna stopped at different times to explain content and at one point talked about the immigration issues between Mexico and the United States.

Students were involved in reading and analyzing information in the text when they were constructing graphic organizers. Before constructing a graphic organizer, Mrs. Hanna would discuss what rhetorical pattern was used to organize the information in the text. One excerpt from my field notes on March 23, 2010 demonstrates the thinking

processes students were engaging in as they identified the rhetorical pattern. The subsection on page 240-241 was titled *Moves Toward Independence* and described how Simón Bolívar and San Martín worked for independence in South America:

> Mrs. Hanna asked what kind of graphic organizer they would make for the section titled *Moves Toward Independence*. One student immediately responded with branching tree because of the two men that helped South American countries gain independence. Another student said linear string because things are happening in a certain order. Mrs. Hanna clarified that linear string is in order but asked what the key words are for branching tree (referring to phrases such as "at the same time" or "meanwhile") and confirmed that the branching tree shows two sets of events happening at the same time such as was occurring in this passage.

The discussion described above demonstrates how students were analyzing the text in order to identify the appropriate rhetorical pattern.

Once the correct rhetorical pattern had been identified, the students, whether co-constructing, cooperatively constructing, or independently constructing the graphic organizer, had to reread the text to identify the information that needed to be put in the graphic organizer. On February 24, 2010 when the students in Mrs. Hanna's class were constructing the topical net graphic organizer for the subsection *Waters of South America* on pages 225-225 in the text, they examined the text and determined that it was talking about rivers and lakes and named them on their graphic organizers.

Use of graphic organizers. During routine social studies instruction in most of the classes, graphic organizers typically were constructed by the teacher, filled in much like a worksheet, and/or used to communicate social studies content to students.

In contrast, during the intervention after students had seen Mrs. Hanna model graphic organizer construction, her students were much more engaged with graphic organizers as they analyzed rhetorical patterns, reviewed the text, and constructed the graphic organizer. For example, after reading the subsection *The Earliest South American* and *The Incas* on pages 230-233 in the text the students, working cooperatively, constructed a matrix graphic organizer to represent the information in the text. Figures 33 and 34 are examples of two matrix graphic organizers constructed by students working cooperatively.

Figure 33. Example 1-matrix graphic organizer constructed cooperatively in Mrs. Hanna's class.

The earliest South Americans/The Incas

The earliest South Americans/The Incas	Where they lived	language	food getting/ type of farming	Claim to fame
Caribs and chibchas	near the Caribbean (nourthern S.A.)	no info	they farmed and fished	homes thata with strawa palm leaves
Túpi Guaraní	tropical rainforest (Paraguay)	Guaraní	farmed useing slash and burn method	Guaraní is one of nations two official languag of Paraguay
Tehuelches	pampas	no info	hunted rheas and other large birds	lived in caves or simple wood shelters
Chavins	north and central peru, Andr	no info	no info	developed first know civilition
Mochicas	northern peru	no info	no info	advanced civilitī
Incas	(Andres) 4 quarters of the world	Quéchua	farmed on terraces	conquered 9 milliō diverse people

Figure 34. Example 2-matrix graphic organizer constructed cooperatively in Mrs.

Hanna's class.

Group	Where	Food	Language	Other things
Caribs + Chicbas	Columbia + Venezuela	farming and from the sea and the river		lived in thatcher houses made from straw and palm leaves
Tupí Guaraní	rain forests	farming using slash and burn technique	Guaraní language	language is one of the national + official language
Tehuelches	the Pampas	hunting birds		in caves of shelter made of wood
Chavins	Peru's north central highlands			one of the first know civilizations
Mochicas	northern Peru			each had an advanced civilization and trading network
Inca	area is SA that covered 500,000 square miles	beans, maize, squash, and more than 200 different kinds of potatoes, terraces for food	Quechua	built a giant civilization
				built terraces, conquered many groups, trade network, stone bridges

In order to construct these matrix graphic organizers, students had to read the text and identify both the civilizations and the categories of information used to describe the groups. Then students had to find the specific details from the text to fill in the matrix. These activities required the students to be actively engaged with the text and the content contained there.

The graphic organizers shown in Figures 35 and 36 were constructed independently by two students in Mrs. Hanna's class for a subsection of text called *Ways of Life* from chapter seven on South America. As a result of Mrs. Hanna's explicit

instruction on identifying rhetorical patterns, these students were able to accurately

represent the text.

Figure 35. Example 1-topical net graphic organizer constructed independently in Mrs.

Hanna's class.

Figure 36. Example 2-topical net graphic organizer constructed independently in Mrs.

Hanna's class.
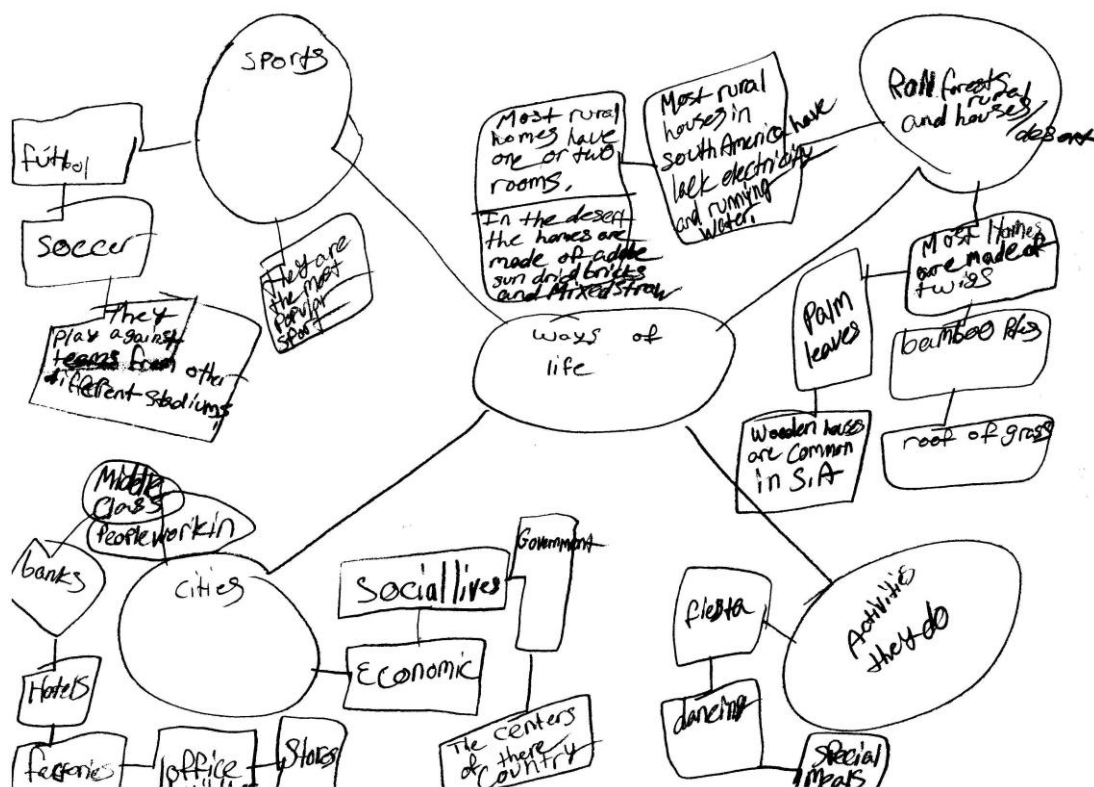
The students who constructed these graphic organizers showed differences in their

understanding of the topical net rhetorical pattern. The student who constructed the

graphic organizer in Figure 35 identified the two subtopics, rural areas and cities, as well

as identified sub-subtopics related to the sub-topics and included details at the appropriate

spot. For example, in one circle attached to the topic of cities, she wrote "have problems

like over crowding and poverty". In a line from that she has a circle and in it is written

"slums" and connected to that are lines with circles and details specific to slums. The

student who constructed the graphic organizer displayed in Figure 36 does not display the

levels of topics and subtopics as the student who constructed the graphic organizer in

figure 35 but was able to recognize the two main subtopics and include appropriate

details for each. While the subtopics of *sports* and *activities they do* could have been combined as one subtopic, this student showed he/she read the text, analyzed the information, and, therefore, was able to construct a graphic organizer to represent the content.

Conclusions. As she taught the rhetorical pattern/graphic organizer intervention, Mrs. Hanna enabled students to read and analyze the textbook more effectively. Students had to read and analyze the text in order to construct graphic organizers to represent the text. As students were constructing the graphic organizers based on the rhetorical pattern, they had to determine which information they needed to include and how it should be arranged. These tasks required more student focus on content than completing teacher-constructed graphic organizers. Despite the fact that behavior tended to be an issue in this classroom, these work samples and the results presented in chapter 5 provide evidence that these students were interacting with the text and learning to construct graphic organizers based on rhetorical patterns.

Mrs. Bystrom

Mrs. Bystrom continued to have a well-structured but pleasant classroom environment during the intervention implementation. She was conscious about time and required the students to be prepared for class so that every minute could be used productively.

Although I was only able to do five observations of Mrs. Bystrom (three occurred on the same day), those observations (as well as the treatment fidelity observations) provided evidence of the effort she put forth to implement the intervention as intended.

Use of the textbook. Because the intervention demanded it, Mrs. Bystrom used the textbook far more during the intervention then she had during pre-intervention observations. On February 2, 2010 she was on day one of the three-day cycle when she was to guide students in reading the text and introduce the content. She read the introductory paragraph for the entire lesson (chapters were divided into lessons and the lessons were divided into specific subsections). She then explained specific terms and pointed out clues in the paragraph that provided information about what they would be reading. She then had the students read the first paragraph of the subsection and asked them to look for new information contained there. By questioning the students, Mrs. Bystrom got responses like "homes" and "their way of life". Mrs. Bystrom pressed the students to explain a little more. One student responded that it tells where their homes are and Mrs. Bystrom pointed out to the students that it also tells what their houses were made of. She continued to have students read paragraphs and questioned them about the content. During the lesson, she also had students turn and talk to their neighbor about the content of specific paragraphs. Towards the end of the subsection, Mrs. Bystrom, by questioning and direction, lead the students to see that each set of paragraphs described a different early civilization and provided similar kinds of information about each civilization. She helped them to see that the information was organized using a matrix rhetorical pattern. One student commented "I can imagine a matrix-the groups on the side and then how they live, what they eat…"

Mrs. Bystrom not only had students reading the text but had them identifying key information, sharing that information with a partner, and writing facts on a 3x5 card as a summarizing activity. After reading the text, she also had the students think about what

rhetorical pattern had been used to prepare them for constructing graphic organizers during the next class period.

Use of graphic organizers. I did not have the opportunity to observe graphic organizer construction in Mrs. Bystrom's class but collected samples of student work. Students constructed these topical net graphic organizers in Figures 37 and 38 cooperatively after reading the subsection *Waters of South America.*

Figure 37. Example 1-topical net graphic organizer constructed cooperatively in Mrs. Bystrom's class.
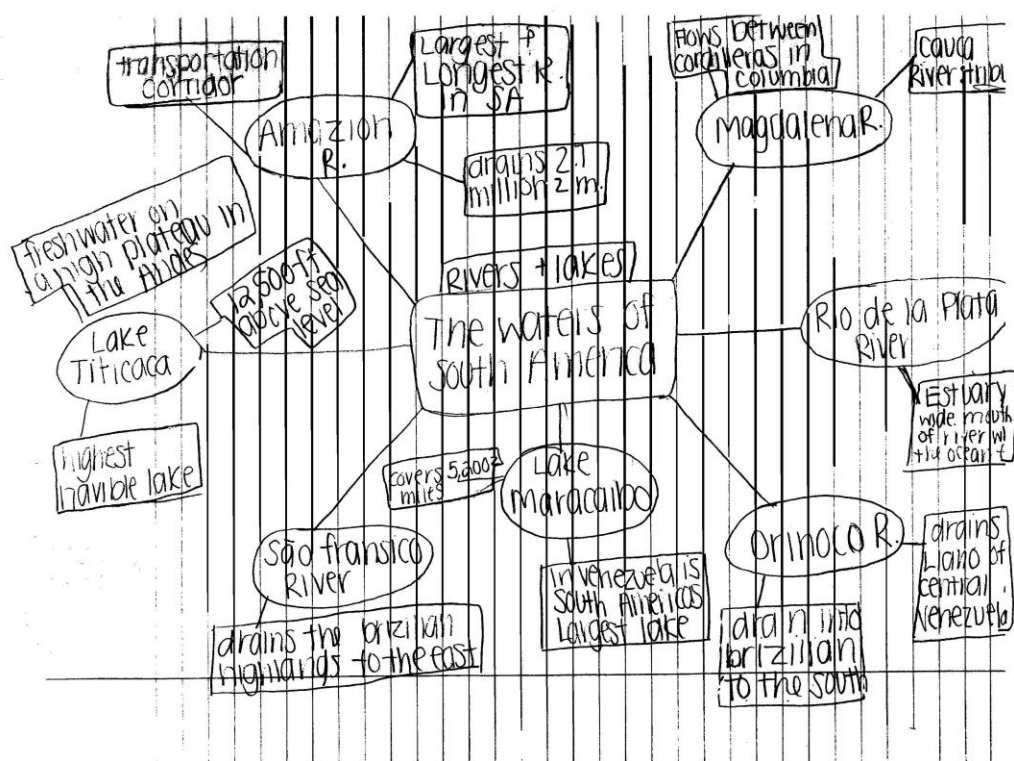
Figure 38. Example 2-topical net graphic organizer constructed cooperatively in Mrs.
Bystrom's class.
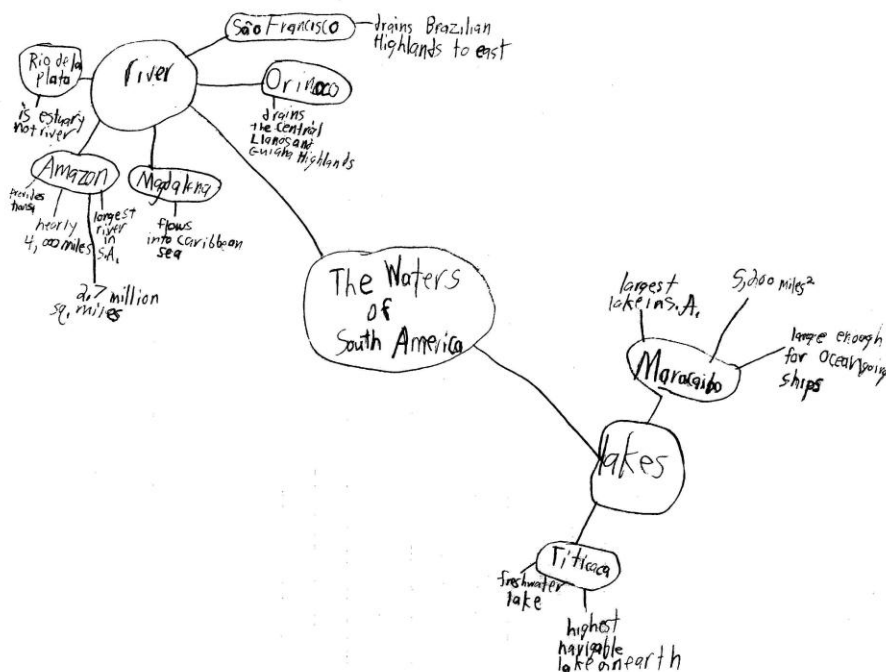
The students who constructed the topical net in Figure 37 did not identify lakes
and rivers as the two subtopics although these terms were written above the title of the
graphic organizer. The students who constructed the topical net Figure 38 did recognize
these subtopics as is displayed on their graphic organizers. These differences in graphic
organizer construction illustrate that students were at different levels of proficiency in
constructing graphic organizers according to specific rhetorical patterns.

Students constructed the branching tree graphic organizer in Figure 39
cooperatively after reading the subsection *Moves Toward Independence*.

Figure 39. Branching tree graphic organizer constructed cooperatively in Mrs. Bystrom's class.
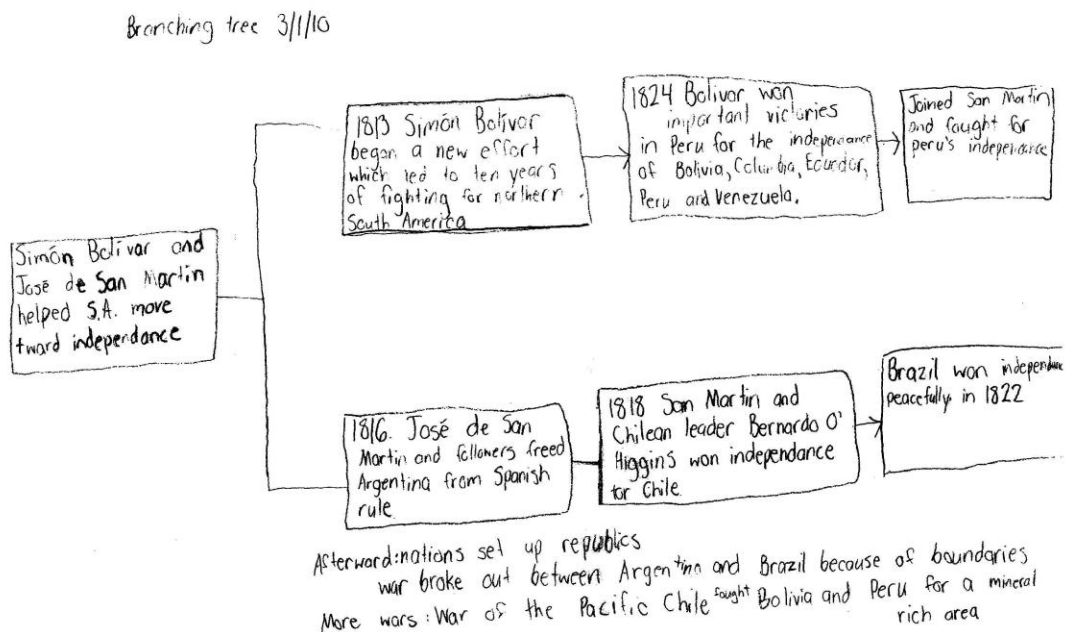
The students who constructed the branching tree graphic organizer clearly showed that two sequences of events were occurring simultaneously.

Students constructed the next set of graphic organizers independently. The teacher only provided assistance if absolutely necessary. The topical net graphic organizers in Figure 40 and 41 were constructed independently for the subsection *Climate and Vegetation* (Mexico). The list graphic organizer in Figure 42 was also constructed independently for the subsection *Mexico's Economy*.

Figure 40. Example 1-topical net graphic organizer constructed independently in Mrs.
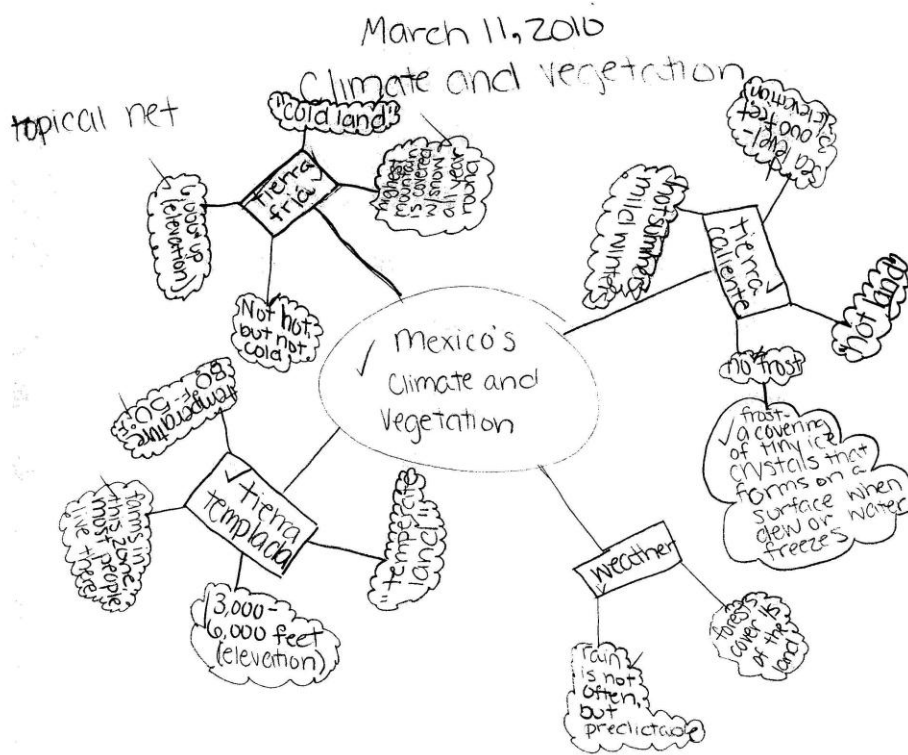
Bystrom's class.

Figure 41. Example 2-topical net graphic organizer constructed independently in Mrs.
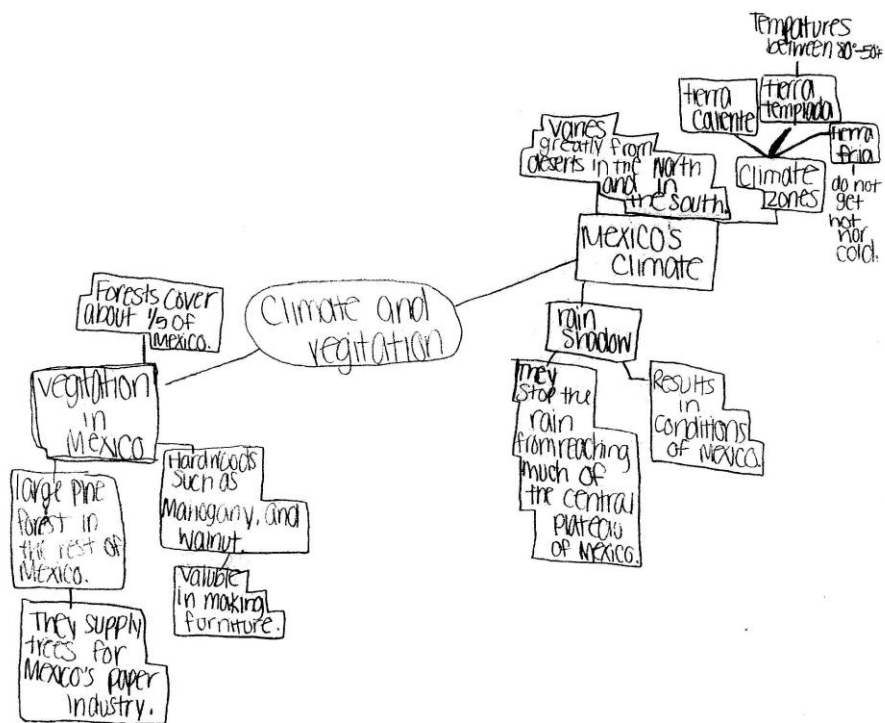
Bystrom's class.

Figure 42. List graphic organizer constructed independently in Mrs. Bystrom's class.
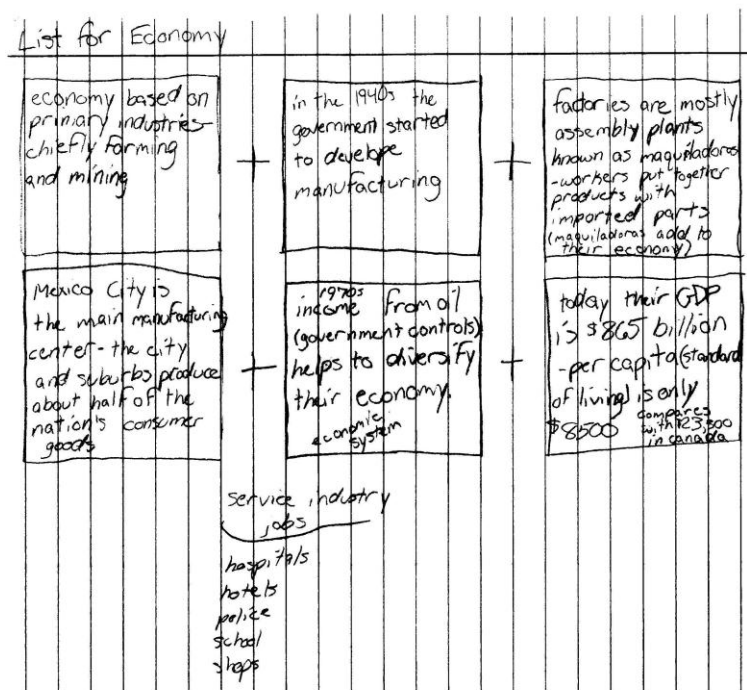
These students understood the rhetorical pattern of the text and were able to accurately display the content in graphic organizer form

 Conclusions. Mrs. Bystrom and her students used the textbook consistently throughout the intervention. Mrs. Bystrom read the text with the students, asked them to identify main ideas, and questioned their understanding as she introduced the content. The students were actively engaged in reading the text as they identified rhetorical patterns and constructed graphic organizers according to those patterns.

Summary

 In chapter 4, I described the social studies instruction provided to students prior to the intervention by the four participating teachers. I described each teacher's classroom

and approach to classroom management. I explained how teachers used the textbook and graphic organizers in their instruction.

The data showed that the teachers used the textbook to varying degrees in instruction prior to the intervention. Mrs. Bystrom made little use of the textbook while Mrs. Varsho used it on a regular basis. Mr. Mason and Mrs. Hanna used the textbook but often had individual students read the text for the rest of the class followed by teacher explanation and comments. In the three classes that regularly used the textbook, there were few times when students read entire subsections of text on their own. In many cases, passages were read by students in pairs or by one student for the rest of the class.

According to the observations, teachers' use of graphic organizers varied. Mrs. Varsho used them during almost every class period. She constructed graphic organizers and students filled them in as she discussed and explained content. Mr. Mason and Mrs. Hanna used graphic organizers sparingly. Mr. Mason used them as he explained content and Mrs. Hanna had students record facts and information on several graphic organizers. Mrs. Bystrom had students record information on Frayer graphic (Klausmeier, Ghatala, & Frayer, 1974) organizers.

The observational data collected after the intervention began showed that the comparison group teachers' social studies instruction generally remained the same. Mrs. Varsho continued to have her students read passages in the text as they worked in pairs to complete assignments. Students filled in graphic organizers as they read text or listened to lessons in class. Mr. Mason did have activities that differed from instruction prior to the intervention such as having students write multiple-choice questions for a section of text and teaching a lesson on making inferences. I attributed the addition of these

activities to the fact that Mr. Mason had to spend three days of instruction on each subsection and used these activities to meet the time requirement. Mr. Mason continued to introduce content with the textbook by having individual students read the text for the rest of the class and make limited use of graphic organizers.

The intervention group teachers' instruction changed as they implemented the rhetorical patterns/graphic organizer intervention. Mrs. Bystrom had students reading and discussing text with partners as she introduced each subsection prior to constructing the graphic organizers. Mrs. Hanna had students following and supplying words as she read the text to them. Both teachers had students actively engaged in constructing graphic organizers. Initially, students watched as the teacher modeled constructing graphic organizers before co-constructing them with her. As students gained experience with a particular rhetorical pattern, they constructed graphic organizers cooperatively and independently. Their involvement with the graphic organizers was much greater during the intervention than in instruction prior to the intervention as they had to think about the rhetorical pattern used to organize the content, construct the graphic organizer to represent that content with the appropriate pattern, and use the graphic organizer to summarize the text. By constructing the graphic organizers according to the rhetorical pattern, students in the intervention groups were consistently engaging with the content in the text.

Having described the instruction the participating teachers in chapter 4, in chapter 5 I discuss how this explicit instruction in rhetorical patterns and constructing graphic organizers impacted students' comprehension of social studies text as evidenced by their

construction of graphic organizers, written summaries, and performance on

comprehension quizzes.

CHAPTER 5

RESULTS: FOCUS ON STUDENTS

Introduction

In this study, I examined the effect of providing sixth-grade students with explicit instruction in identifying rhetorical patterns and using those patterns to represent the content graphically on their ability to comprehend social studies text.

In this chapter, I begin by reviewing how treatment fidelity was documented in the section labeled *Treatment Fidelity.* Next, I present the data collected to compare the comparison and treatment groups. I used three different measures to examine the effects of explicit instruction on rhetorical patterns found in textbooks and construction of graphic organizers to represent the content found there. First, I looked at graphic organizers constructed before and after the intervention instruction took place. Second, I examined summaries written before and after the intervention took place. Finally, I analyzed student performance on three comprehension quizzes comprised of multiple-choice and essay questions. Therefore, the sections explaining the findings for each of these measures are labeled: *Analysis of Student-constructed Graphic Organizer Data, Analysis of Written Summary Data,* and *Analysis of Comprehension Quiz Data.* To analyze the data for the graphic organizers and summaries, I used analysis of variance (ANOVA). The specific type of ANOVA used is described in each section. I used t-tests to analyze the comprehension quiz data.

In addition to the measures mentioned above, I conducted think-aloud tasks asking a random sample of students from both the comparison and treatment groups to construct two graphic organizers: one graphic organizer based on a passage from the

social studies text and one graphic organizer based on a passage from the health text. The

think-aloud transcriptions were analyzed and coded in order to gather information on

what processes students used to complete the graphic organizer tasks. The think-aloud

data were also analyzed to determine if students transferred their knowledge of rhetorical

patterns in graphic organizer form to a textbook other than the social studies textbook

which was used for instruction during the intervention.

<div align="center">Treatment Fidelity</div>

I used three approaches to assess treatment fidelity: treatment fidelity checklists

(Appendix F), instructional record sheets (Appendix N), and observations. Although not a

formal data source, email communication between the participating teachers and me

provided additional evidence of treatment fidelity.

Treatment Fidelity Checklist

Both of the intervention teachers were observed once a week. The observer

checked off whether the teacher was on Day 1, 2, or 3 of the instructional plan for each

subsection. The observer then checked off the specific activities that were completed on

that day. The data on these checklists demonstrated that the teachers consistently

followed the three-day instructional plan and appropriately implemented the intervention

instruction for that day.

Instructional Record Sheets.

The teachers filled in the instructional record sheets daily. They briefly

described their activities on the three days allotted for instruction for each text subsection.

I then compared the treatment fidelity checklists with the instructional record sheets and

found that the information recorded on the treatment fidelity checklists matched the

information on the instructional record sheets except for two dates. The discrepancy with the dates may have been a recording error on the part of the teacher but there was no evidence that the intervention was not being carried out as intended. The instructional record sheets completed by the comparison group teachers confirmed that they followed the three-day plan ensuring that the comparison and intervention groups spent the same amount of time on each subsection.

Observations

The observer who assisted with pre-intervention observations at the start of the study continued to observe the comparison teachers once a week over the course of the study. The purpose of these observations was to provide evidence that the routine social studies instruction that occurred in the observations conducted prior to the study was maintained. As I reviewed the observer's notes, I found that routine social studies instruction, as described in chapter 4, continued in the comparison groups throughout the study.

I observed both intervention teachers throughout the study. I observed the intervention teacher from School B once a week for the duration of the study. I observed the intervention teacher from School A five times during the course of the intervention. I was prevented from completing further observations of Teacher A because of distance and schedule. My notes from these observations confirmed that the teachers were carrying out the intervention as intended. As detailed in chapter 4, the observational data provides evidence that they were correctly implementing the intervention.

Email Communication

Teacher communication in the form of emails also provided evidence that the teachers were concerned about implementing the intervention as intended. In these emails, the teachers asked questions like "Clarify on Phase two- can the students create their organizers with a partner?" or "The Incas, is that supposed to be a separate subsection that we would spend three days on?" At the beginning of the study in particular, the two intervention teachers asked questions that demonstrated they were trying to implement the intervention according the training they received.

Three formal types of data were collected to determine if the intervention was implemented with fidelity: treatment fidelity checklists, instructional record sheets, and observations. Each source of data was analyzed and then compared with the others to triangulate the data. After cross checking the treatment fidelity checklists with the instructional record sheets, I analyzed them in light of the intervention observational data described in chapter 4 and each of these data sources confirm that the intervention was implemented with fidelity.

The Effects of Explicit Instruction on Rhetorical Patterns on Student Comprehension

of Social Studies Textbooks

Analysis of Student-Constructed Graphic Organizer Data

I hypothesized that students, after receiving explicit instruction in rhetorical patterns, would be able to more accurately construct graphic organizers reflecting those rhetorical patterns compared to students in the comparison group. To control for content of the passages used for the pretest and posttest, there were two forms (A and B). On December 10, 2009, 42 sixth-grade students from middle school C who were not

receiving the intervention completed either Form A (20 students) or Form B (22 students) that would be used for the pre- and posttests. Results from t-tests comparing the means from both forms indicated there was not a significant difference between student performance on the graphic organizer portion of Form A (*M*= 2.84, *SD*=.98) and Form B (*M*=3.03, *SD*= 1.12), t(203) =-1.27, *p*=.207).

I scored student graphic organizers using the Graphic Organizer Scoring Rubric (see Table 5 in chapter 3). To determine inter-rater reliability levels for scoring, I trained a reading specialist to score the graphic organizer responses using the rubric. She then scored 16% of student-created graphic organizers for the pretest and posttest. Inter-rater reliability for the pretest graphic organizers was 75.0 % and 84.0 % for the posttest responses. After discussion we were able to reach 100% agreement on all responses.

I conducted a mixed between-within subjects ANOVA with treatment group as the between subjects variable and time the within-subjects variable. In reviewing descriptive data, I found that the Kolmogorov-Smirnov test for normality was significant (*p*<.001). According to Pallant (2007), a significant result is common with larger samples but ANOVA is fairly robust to this type of violation. I also looked at histograms for both the pre- and posttests. They are displayed in Figure 43 for the pretest and Figure 44 for the posttest.

Figure 43. Pretest graphic organizer score frequency distribution.
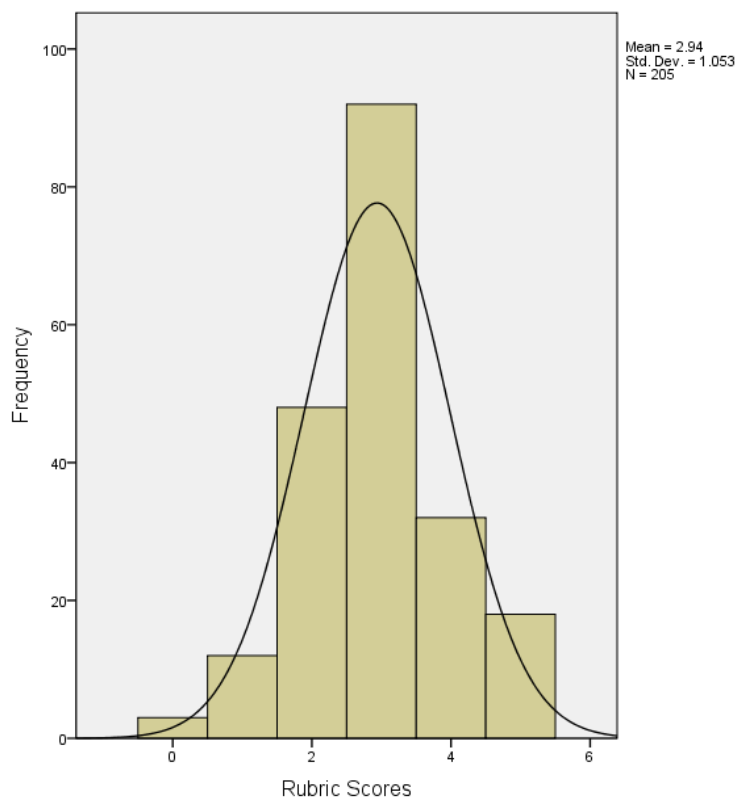
Figure 44. Posttest graphic organizer score frequency distribution.
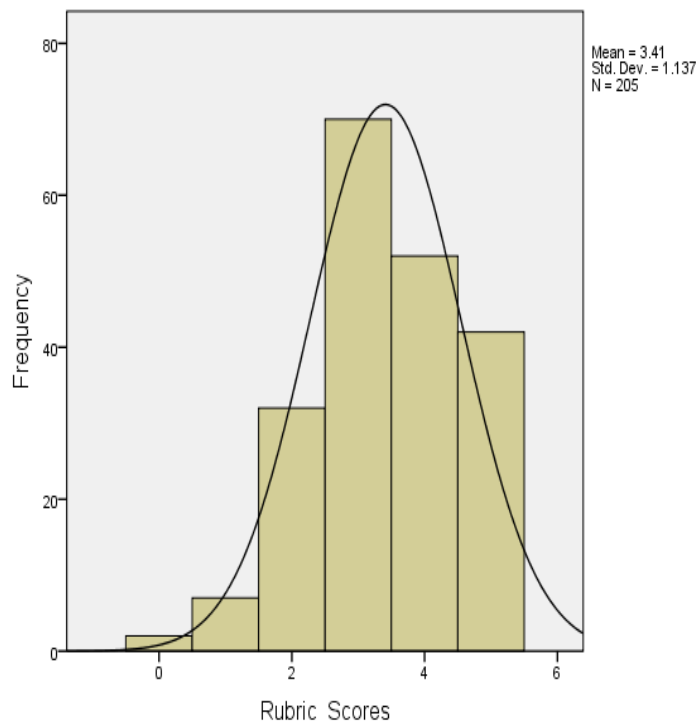
In reviewing the histograms, I found the pretest to be normally distributed and the posttest to be slightly negatively skewed. I attributed this result to the fact that the treatment groups had made gains on the posttest thus skewing the distribution.

Levene's Test of Equality of Error Variances was significant for the posttest ($p<.001$). ANOVA, however, is fairly robust to a violation of this assumption when group sizes are equal or nearly equal (Pallant, 2007). In this study, the ratio of the largest to smallest group sizes was less than 1.5 (104/101=1.03) meeting the requirement for nearly equal group sizes.

Table 9 shows the means and standard deviations for student-constructed graphic organizers for the pre- and posttests.

Table 9

Means and Standard Deviations for Pretest and Posttest Student-Constructed Graphic

Organizers

Factor	*n*	Mean	Standard Deviation
Pretest			
Comparison	101	3.26	.89
Intervention	104	2.63	1.12
Posttest			
Comparison	101	2.99	.87
Intervention	104	3.82	1.22

The comparison group had a mean of 3.26 on the pretest and a mean of 2.99 on the posttest. In reviewing the frequencies for the comparison schools, School D had 40 students score a 3 on the pretest, 16 students score a 4, and 6 students score a 5. On the posttest however 48 students scored a 3, six students scored a 4 and three students scored a 5. The difference in these numbers may account for the drop in the posttest mean. The treatment group had a mean of 2.63 on the pretest and a mean of 3.82 on the posttest showing positive growth.

I compared these means using the mixed between-within subjects ANOVA. I used the multivariate statistics to ensure I did not violate the assumption of sphericity. These results are in Table 10. I found a significant effect for time ($F(1, 203) = 35.89$, $p=.000$). However, this main effect for time needs to be viewed in terms of a statistically significant interaction between time and treatment, ($F(1,203) = 89.38$, $p=.000$, partial eta

squared=.31). The statistically significant interaction of time and group indicates the change in graphic organizer scores from pretest to posttest was not the same for students in the graphic organizer intervention group as for those receiving routine social studies instruction. The partial eta squared value of .31 indicates a large effect size. According to Cohen (1988), a partial eta squared value of .01=small effect, .06=moderate effect, and .14=large effect. The interaction is also shown in Figure 45.

Table 10

ANOVA Table for Graphic Organizers

Source	df	MS	F	p	Partial Eta Squared
Between-Subjects					
Intercept	1	4125.56	2699.55	.00*	.93
Treatment	1	.97	.64	.43	.003
Error	203	1.53			
Within-Subjects					
		Wilks'			
	df	Lambda	F	p	Partial Eta Squared
Time	1	21.90	35.89	.000**	.15
Time*Group	1	54.58	89.38	.000**	.31
Error	203	.61			

*p<.05, **p<.001

Figure 45. Pretest and posttest mean scores for graphic organizer.
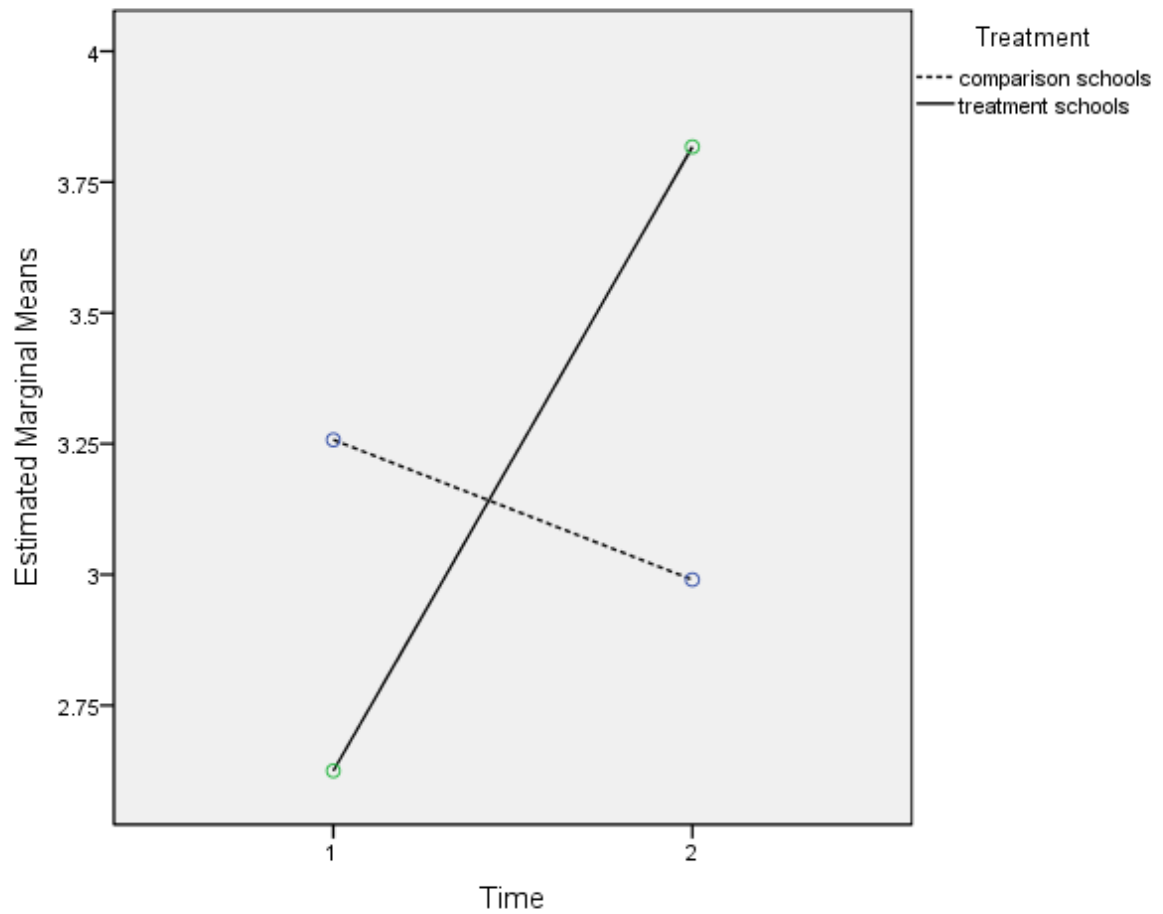
While the focus of data analysis was to study the difference between the treatment and

comparison groups, looking at the individual schools does provide an additional

perspective on the data. As shown in chapter 3, Schools A and D had a proficiency level

18-22 percentage points higher than Schools B and C on the Pennsylvania State System

of Assessment (PSSA) for 2009. The students in Schools A and D appear to have

stronger reading skills than those in Schools B and C. Figure 46 shows the pretest to

posttest changes for all four schools.

Figure 46. Pretest and posttest total mean scores on graphic organizers by school.
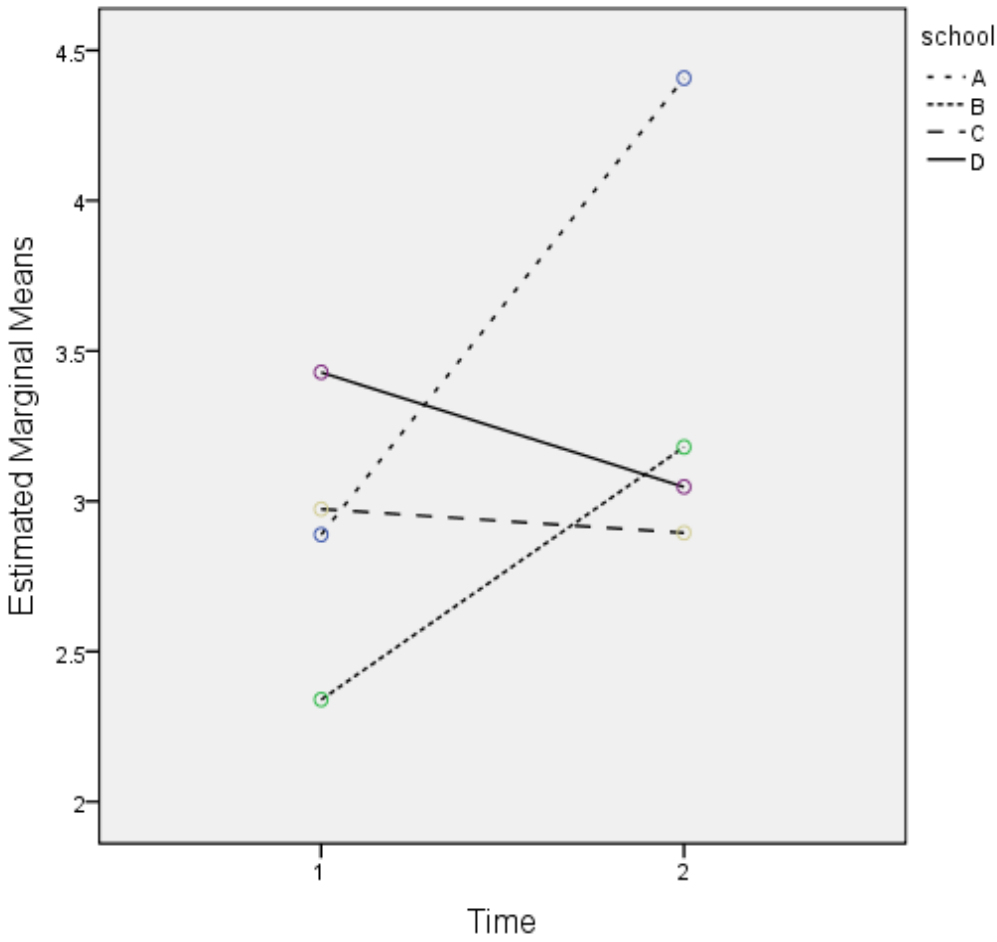
While students in intervention School B did not show as much growth in the mean scores on the graphic organizers from pretest to posttest (+ .84) as intervention school A (+1.52), their mean for the posttest was higher than students in comparison School D who had higher reading achievement scores on the PSSA. Despite having lower reading achievement scores, these students were able to show significant growth in graphic organizer construction.

To provide additional evidence of the growth in constructing graphic organizers by students in the intervention group I have displayed, the pretest and posttest graphic

organizers for three students. The pretest and posttest graphic organizers for students one, two, and three are shown in Figure 47.

Figure 47. Pretest and posttest graphic organizers for intervention students one, two, and three.

Pretest graphic organizer by intervention student one.

Graphic Organizer

Construct your graphic organizer in the space provided below.

major land regions Other Parts of w. Europe lochs & firths

• Great European Plain- Stretches from northern France across Belgium. flat rolling land with some low hills.

• Central uplands - most of the land is Rocky and the soil is not fertile enough extends from Portugal through southern France to Central Germany.

• Alpine mountain System- covers the Southern part of the western Europe. Has 3 mountian chains - The Sierra Nevada in spain, the Pyrenees, and the alps.

• Finland is known for its more than 60,000 lakes.

• Scotland is known for its long, deep narrow lakes. Also known for its funnel-shaped bay.

• Recognized feature is the Rock of Gibraltar at the entrance to the Mediterranean Sea.

• A loch is a long, deep, narrow lake.

• A firth is a funnel-shaped bay.

• Glaciers that carved out the lochs and firths in Scotland also cut the steep-walled fjords of coastal Norway.

Posttest graphic organizer for intervention student one.

Graphic Organizer

Construct your graphic organizer in the space provided below.
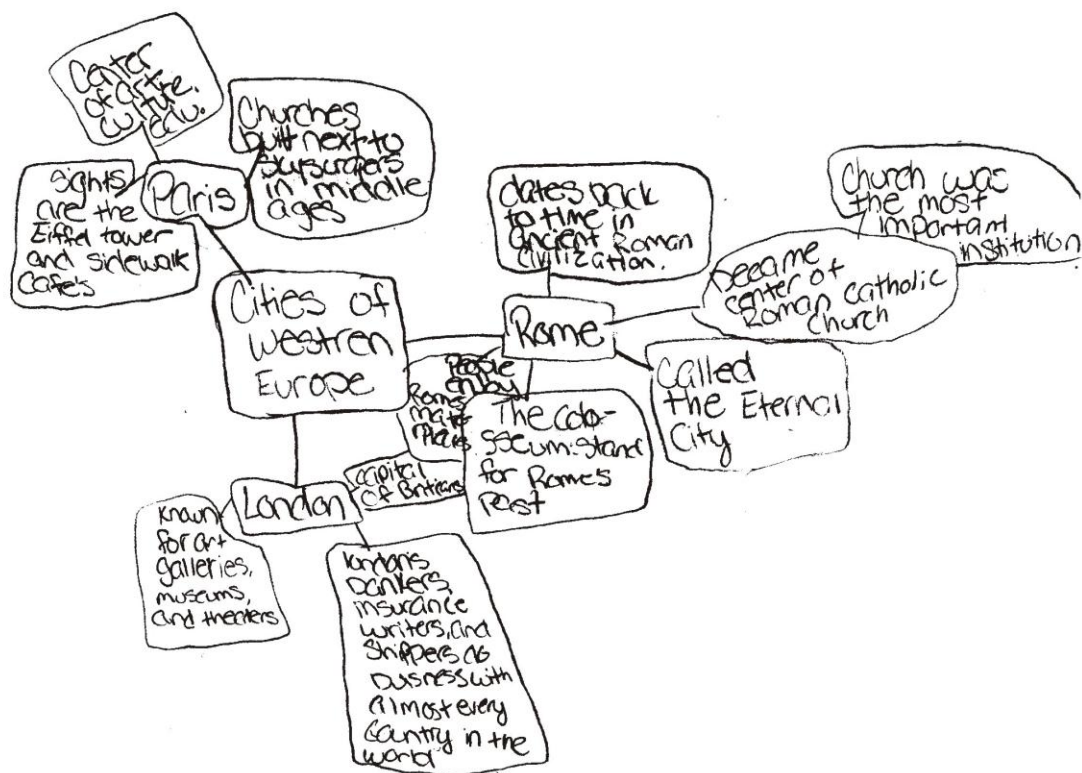
Pretest graphic organizer for intervention student two.

Graphic Organizer

Construct your graphic organizer in the space provided below.

London	Rome	Paris
. It remains a lively city known for its art galleries, museums and theaters.	Its history so long is called Eternal City it became the center of Roman Catholoic life	.Center for art, culture, and education.
.It was the capital of Britians former vast colonial empire	.It dates back to the time of the ancient Roman Civilization.	.They produce a variety of clu...
.Cities in western Europe show influences from other cultures.	.There are ruins of ancient buildings standing today as symbols of Rome's Past	.It's a mix of old and new .It's in Western Europe. .There are sites in it.
.It's been said that "if your tired of London, your tired of life.	.Leaders of the Church, called popes made Rome a center for art, and education as well as religion	
.They have high-rise buildings and public transportation systems that resemble those in the US.		

Posttest graphic organizer for intervention student two.

Graphic Organizer

Construct your graphic organizer in the space provided below.

Pretest graphic organizer by intervention student three.

Graphic Organizer

Construct your graphic organizer in the space provided below.

Great European Plain	The central uplands	The Alpine Mt. system
The Great European Plain stretches from Northern France across Belgium all the way to central Europe and Russia	• The central uplands flow through Portugal through Southern France to central Germany	• It is made up of many mountain chains.
• The plain is made up of flat, rolling land with some low hills	• It is made up of low mountains and Plateaus w/ elevations from about 1000 to 6000 ft.	• The Alps stretch through part of southern France, norther Italy, through most of Switzerland and part of Germany and Austria
• It contains western Europe's bes farmland	• It also contains one of western Euroe	• The Alps also contain some of the highest mts. in Europe
• It is the most densely populated in the region		

Posttest graphic organizer by intervention student three.

Graphic Organizer

Construct your graphic organizer in the space provided below.

Topical text — Cities of Western Europe

Paris is the industrial center of France

Paris is a center for art, culture, and education

Paris

Factories in the vicinity of Paris produce a wide variety of goods such as automobiles

Cities of Western Europe

Rome

This city dates back to ancient Roman civilization

Because its history is so long, it is called the eternal city

Today people come from all over the world to enjoy Rome's masterpieces

London is very connected with other countries

London

London remains a lively city, known for its art museums, and theaters

It was the capital of Britains former colonial empire, and has become a center for international finance

In each of the pretest graphic organizers, the students have some sense of how the text is organized as they name either the three main regions of Western Europe or the main cities in Europe. Each student gives characteristics of each region but in list form. Student one also includes other details that do not fit with the three main land regions. Student two included a detail about all the cities under the heading for London. These students resorted to listing information most likely because, once they identified the main topics, they did not know how to display the details in graphic organizer form.

As is evident, on the posttests these students identify the overall topic of the passage, the three major subtopics as well as display the details in relation to those subtopics. The pretest and posttest graphic organizers for these students demonstrate how

learning the rhetorical pattern enabled the students to construct the graphic organizer to represent that rhetorical pattern.

The students in the comparison groups showed a similar sense of text organization in their graphic organizers on the pretest as the intervention students. The pretest and posttest graphic organizers for comparison students one, two, and three are shown in Figure 48.

Figure 48. Pretest and posttest graphic organizers for comparison students one, two, and three.

Pretest graphic organizer for comparison student one.

Graphic Organizer

Construct your graphic organizer in the space provided below.

Main Citys

Rome

Cafes are
known in
Paris for
Public Gathering

In
France

Paris

Eiffel
tower

London

What is Rome's
nickname?

Eternal
City

London Finance
travels all over
the world

Known for museums
art galleries, &
theaters

Vatican City, Rome
is the head of
the Roman Catholic Church

Posttest graphic organizer for comparison student one.

Graphic Organizer

Construct your graphic organizer in the space provided below.

Bodies of Water	land Reigons	Vocab
Alpine River • Crosses central uplands • Most important	Great European Planes • Stract N France across Belgium, Netherlands + northern Germany	lochs - a kind of lake carved by glaciers found in Scotland
	Central uplands - Portugal through Central Germany Made of low Mountains and plateus	bog - an area or Marsh or swamp
	Alpine Mountian System - Western Europ Made up of Several Mountain Chains	firth - a funnel shaped bay along Scotlands co st

Pretest graphic organizer for comparison student two.

Graphic Organizer

Construct your graphic organizer in the space provided below.

The Great European plain stretches from northern Germany to central Europe and Russia

The Alpine are made of Several mountain Chains — the Siera nevada in Spain the Pyrenee and alps.

The Plain consists of flat rolling land with low hills

Other parts of western Europe are well know for their Physical features

Western Europe's mainland

Finland for example is known for it more then 60,000 lakes

The Alps have some Of the highest mountains in Europe

The mainland of western Europe has three major regions

Scotland is known for it long deep narrow lakes called lochs and funnel-shaped bays

Posttest graphic organizer for comparison student two.

Graphic Organizer

Construct your graphic organizer in the space provided below.

Cities

high-rised buildings and public transportation systems

The city of Rome in Italy dates back to the time of ancient Roman civilization because its history is so long it is called the Eternal

master pieces great works of art

institution established organization

western Europe has some of the best known cities in the world.

Berlin
Madrid
Rome
london
Paris

Western Europe

Pretest graphic organizer for comparison student three.

Graphic Organizer

Construct your graphic organizer in the space provided below.

Cities of Western Eroupe

Paris
- Center of art, culture, and education
- industrial center of france
- factories produce goods like automobiles
- churches built in middle ages and skyskrapers
- Effiel Tower and sidewalk cafes
- Cafes have become centers of urban life where perple meet and talk.

Rome
- dates time back to Roman civilization
- lots of history
- nickname the Eternal City
- ruins of antrant buildings such as the Colosseum
- Center of Roman cothlaic Church
- Vatican City - Hedquarters for Church
- headers of Church Popes
- Center of art and education as well as religion
- mosterpeices - people come to see them

London
- lively City
- art galleries, museams, and theaters
- was the capitol of Brittans forma Vast Colonial empire
- Center internatio. finance
- bankers, insurance writers, shippers do bisnniss around the world

Posttest graphic organizers for comparison student three.

Graphic Organizer

Construct your graphic organizer in the space provided below.

Western Eroupe's Mainland

Great Eroupean Plain / Central | Uplands | Apline Mtn. System

Great Eroupean Plain
- N France, Belgium, the Neatherlands N Germney, Central Eroupe, Russia
- flat rolling land with low hills
- Western Eroups best Farm land
- Most densley populated areas
- To create more land for living and working countries such as Belgim and the Netherby move drained water from their costal areas; polders

Central Uplands
- Portigul → Southern France → central Germnay
- low mountians + plateaus
- forests - some
- rocky - most - not fertile soil
- some good farmland in river valleys
- Rhine River is one important water-way central uplands
- borders Switzerland, Liechtenstein, Austria, France, and Germeny

Physical Features
- Finland - more than 60,000 lakes
- Scottland - lochs - firths - Glaciars

Apline Mtn. System
- Southern part of western Eroupe
- several mountian chains
  - Seirra Novada
  a. Spain
  - Pyrenees
  - Alps
  a. Southern France
  b. Northern Italy
  c. Switzerland
  d. Southern Germany + Austria
- have some of highest mountians in Eroupe
- snow capped peaks + scenic valleys

- Norway - fjords
- Mediterranean Sea - Rock of Gibraltar

On the pretest graphic organizers, comparison students one and three identify the three major cities in Western Europe and give some details about each one with student three using a listing strategy. Student two uses a topical net format for the graphic organizer but the details all come from the center circle which makes it difficult to distinguish their level of importance and relationship to one another.

As would be expected in the posttest graphic organizers, the comparison group students, continued to show a sense of text organization. Student one identified the land regions as well as made a category for less important information such as lochs, firths, and bogs. Student two and three used the same approach to graphic organizer construction by making a web or listing details under subtopics from the text.

These results indicate that the intervention students, facilitated by direct instruction on rhetorical patterns, could recognize the rhetorical patterns used in social studies text passages and construct graphic organizers based on the rhetorical pattern that display both the importance of information as well as the relationship of ideas to one another.

Analysis of Written Summary Data

I hypothesized that students, after receiving instruction in constructing graphic organizers based on rhetorical patterns, would be able to write more complete summaries of social studies textbook passages than students who had not received such instruction.

I scored the written summaries using the Written Summary Scoring Rubric (see Table 6 in chapter 3). To determine inter-rater reliability levels for scoring, I trained a reading specialist to score the summaries using the rubric. She then scored 16% of the written summaries from both pretests and posttests. Inter-rater reliability for the pretest written summaries was 87.5% and 90.6% for the posttests. Any discrepancies in scores were resolved through discussion resulting in 100% agreement.

I conducted a mixed between-within subjects ANOVA with group as the between- subjects variable and time as the within subjects variable. In reviewing the descriptive data, I found that the Kolmogorov-Smirnov Tests of Normality was significant ($p<.001$). As stated, a significant result is common with larger samples but ANOVA is fairly robust to this type of violation. I looked at the distribution for the written summary pretest which is displayed in Figure 49.

Figure 49. Pretest written summaries score frequency distribution.
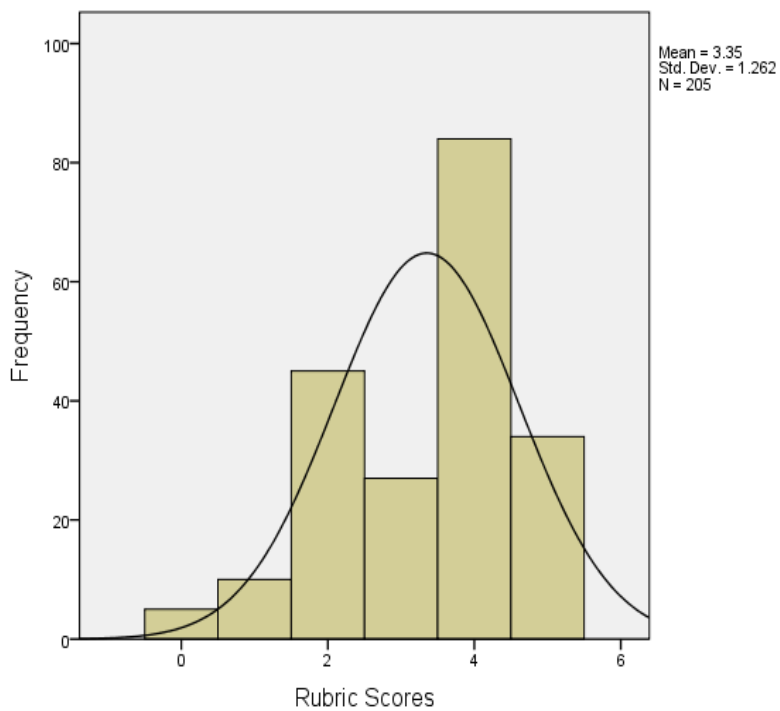
These results were clearly not normally distributed. In reviewing the data by school, I found a distinct pattern which is replicated in the overall distribution. The specific frequency of scores is in Table 11.

Table 11

Frequency Data for Scores on the Written Summary Pretest by School

School	Rubric Scores					
	0	1	2	3	4	5
A	0	0	16	6	22	10
B	3	7	17	7	13	3
C	2	3	10	5	16	2
D	0	0	2	9	33	19

Schools A, B, and C each had fewer students receive threes on the written summary pretest. This may have occurred because, in order to receive a three, the summary had to show some evidence of being organized according to the rhetorical pattern. Students in School D did not show this same pattern. Interestingly, students from School D had the highest scores on the state assessment (PSSA). These students appeared to be more proficient in writing summaries reflecting the text organization than students from the other schools. Their higher reading abilities may have contributed to this result.

The written summary posttest data is more normally distributed as indicated by Figure 50.

Figure 50. Posttest written summary score frequency distribution.
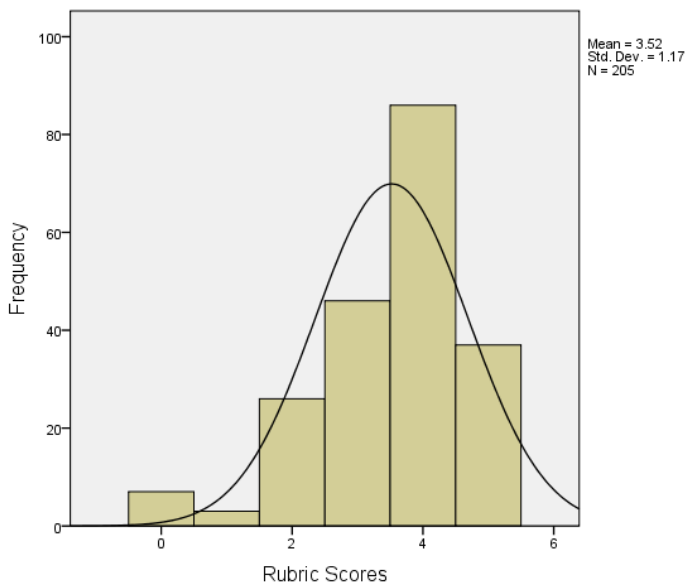
While this distribution has a slight negative skewness, I attributed this result to the fact that the treatment groups had received higher scores on the posttest.

The homogeneity of variance assumption was met for the posttest ($p. =.262$) but not for the pretest $(p =.01)$. Again, given that ANOVA is fairly robust to this assumption and, having nearly equal group sizes, I proceeded with the analysis. Table 12 shows the means and standard deviations for the written summaries.

Table 12

Means and Standard Deviations for Pretests and Posttest Written Summaries

Factor	*n*	Mean	Standard Deviation
Pretest			
Comparison	101	3.66	1.14
Intervention	104	3.05	1.30
Posttest			
Comparison	101	3.49	1.21
Intervention	104	3.56	1.14

The comparison group had a higher mean (3.66) on the written summary pretest than the intervention group (3.05). As demonstrated above, the higher means for the comparison group may be attributed to the performance of students in School D who appeared to be more proficient in summarizing text at the beginning of the study.

I compared these means using the mixed between-within subjects ANOVA. I used the multivariate statistics to ensure I did not violate the assumption of sphericity. These results are in Table 13. I found there was a statistically significant interaction between time and treatment, (F (1,203) = 15.54, *p*=.000, partial eta squared=.07). The interaction of time and group indicates that the change in scores on the written summaries were not the same from pretest to posttest for the two groups. The partial eta squared value of .07 indicates a moderate effect (.01=small effect, .06=moderate effect, .14=large effect).

Table 13

ANOVA Table for Written Summaries

Source	df	MS	F	p	Partial Eta Squared
Between-Subjects					
Intercept	1	4846.71	2310.64	.00**	.92
Treatment	1	7.55	3.60	.06	.02
Error	203	2.10			
Within-Subjects					
	df	Wilks' Lambda	F	p	Partial Eta Squared
Time	1	2.81	3.61	.06	.02
Time*Group	1	12.12	15.54	.00**	.07
Error	203	.78			

*p<.05, **p<.001

The graph in Figure 51 shows that students in the intervention group made significant growth in writing summaries of text passages after constructing graphic organizers while the scores of students receiving routine social studies instruction went down slightly.

Figure 51. Pretest and posttest mean scores for written summaries.
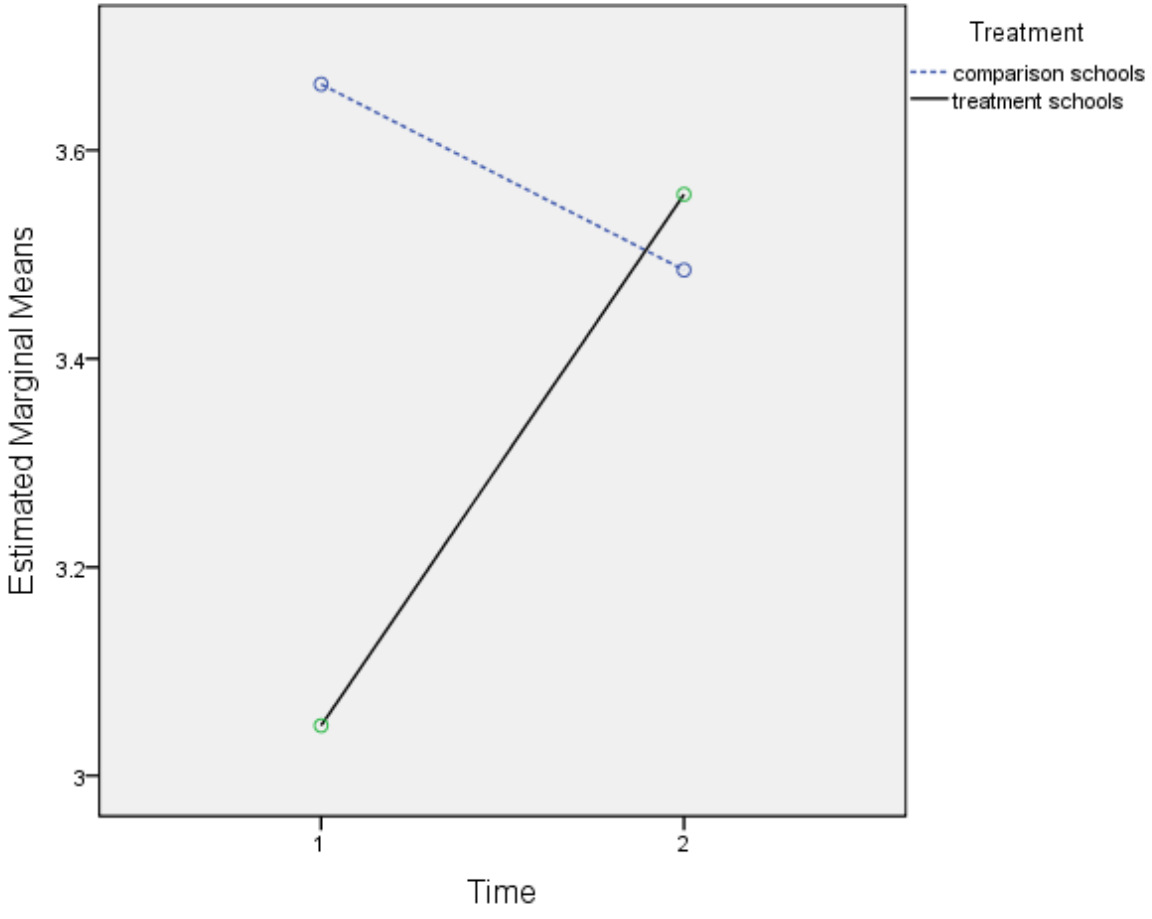
The fact that the intervention group mean was lower than the comparison group on the

written summary pretest demonstrated that the intervention group not only made

significant gains as a result of the intervention but that the intervention was powerful

enough to overcome the initially weaker performance of the intervention group.

As with the graphic organizers, in Figure 52 I display the pretest and posttest total

means scores for written summaries by school.

Figure 52. Pretest and posttest mean scores on written summaries by school.
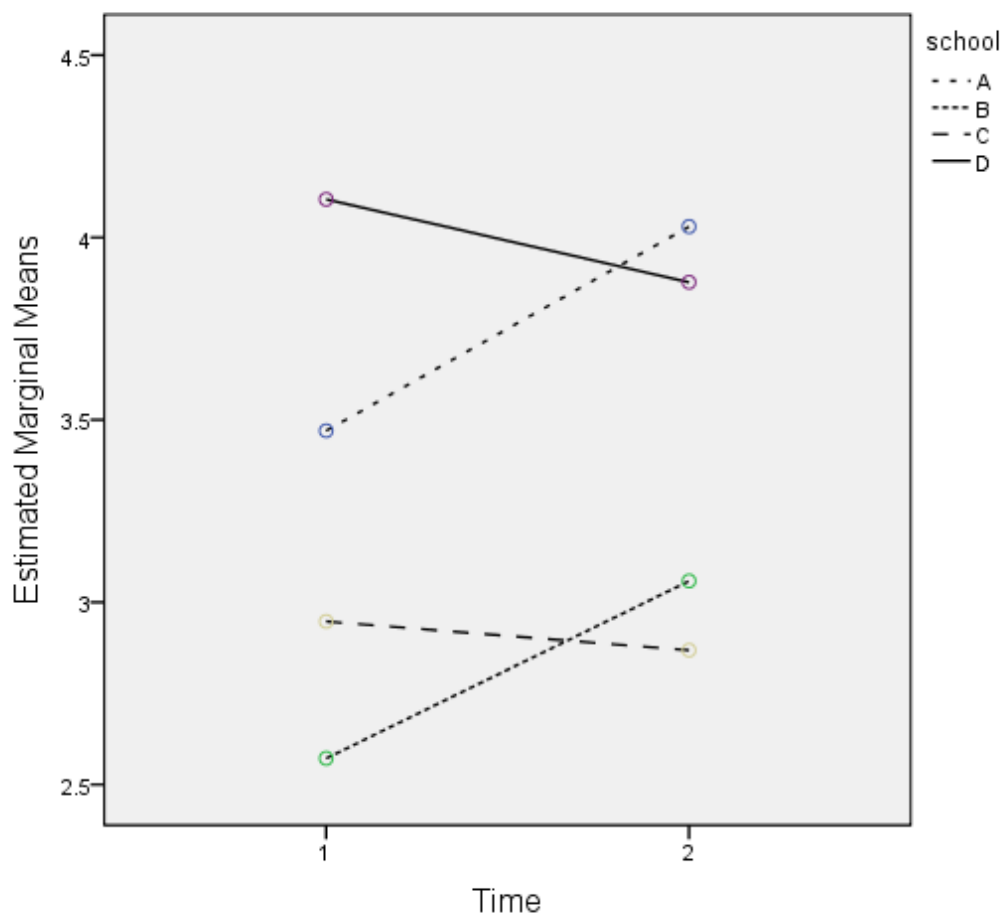
On the pretest and the posttest, the students in Schools A and D who have higher reading achievement were more proficient in writing summaries than students in Schools B and C. What is worth noting however, is that both intervention schools made gains from pretest to posttest demonstrating that the intervention can facilitate summary writing. The fact that School A had to overcome a large difference in means (-.74) on the pretest to score higher than School D on the posttest also shows the strength of the intervention.

To illustrate the growth in composing written summaries, I have displayed in Figure 53 the pretest and posttest summaries written by intervention students four, five, and six.

Figure 53. Pretest and posttest written summaries for intervention students four, five, and six.

Pretest written summary for intervention student four.

Written Summary

Write your summary of this subsection on the lines provided below.

Lets get started with major land regions. The 3 land regions are Great European Plain. Central uplands, and Alpine mountain system. The Great European Plain includes flat rolling land with some low hills. It also stretches from Northern France across Belgium. The central uplands land is mostly Rocky, and the soil is not fertile enough. It extends from Portugal through Southern France to central Germany. The Alpine mountain system covers the southern part of western Europe. It has 3 mountain chains - the Sierra Nevada in Spain, the Pyrenees, and the Alps. Now moving onto the other parts of western Europe. Finland is known for its 60,000 lakes. A recognized feature is the Rock of Gibraltar at the entrance to the Mediterranean Sea. The lochs & Firths are Next. A loch is a long, deep, narrow lake. A firth is a funnel-shaped Bay. Glaciers that carved out the lochs & Firths in Scotland also cut the steep-walled fjords of coastal Norway. That's my summary for the western Europe.

Posttest written summary for intervention student four.

Written Summary

Write your summary of this subsection on the lines provided below.

There are 3 cities in Westren Europe that will be discribed in the summary. The first one is Paris. Paris has sights like, the Eiffel Tower and Sidewalk Cafes. It also has center of art, culture, and education. Paris's churches are built next to skyscrapers in the Middle Ages.

The second city is Rome. Rome is where people enjoy the masterpieces. It dates back to time in ancient Roman Civilization. Rome became center of Roman Catholic Church. The Church was the most important institution. Rome was also called the Eternal City. The Colosseum stands for Rome's past.

And the third city is London. London is known as the capital of Britians. It is also known for art galleries, museums, and theaters. London's bankers, insurance writers, and shippers do buisness with almost every country in the world. Those are the three cities I was talking about in the summary.

Pretest written summary for intervention student five.

Written Summary

Write your summary of this subsection on the lines provided below.

Cities of western Europe was about cities in western Europe.

Here are some cities I learned about. Spain, Rome, France, Paris, Brittan, London, Berlin and Madrid

Most Cities have beautiful artwork, side walk Cafés, so people can meet each other and talk about things that are important. They have Mueseums.

Posttest written summary for intervention student five.

Written Summary

Write your summary of this subsection on the lines provided below.

Western Europe's main land has mountains, forest, plains.

First is the mountains wich has snow capped peaks wich means it gets snow around the mountains and it's probaly cold, ne

Next is the uplands wich has forest wich means that it has little animals like Chipmunks squirls and more, also the uplands have no or little farming because the soil is not verry fertile, it expands from Portugal to Russia Next is the plains, it stretches from Bulgum to Russa of Central Europe

Pretest written summary for intervention student six.

Written Summary

Write your summary of this subsection on the lines provided below.

Their are many physical features in Western Europe. Here are some of them. Their are snow covered mountians in western Europe, like the Swiss Alps. Below them their are beautiful, green, large valleys. In other areas their are steep plateaus, long, rolling plains, and small hills. In the Netherlands they have polders or an area of low-lying land reclaimed from the sea. They use these to build more buildings and increase jobs. In Greenland they have hot springs and geysers. Scotland is know for it lochs or deep, narrow lakes like loch Ness, and flirths or funnel-shaped bays. These are only some of the beautiful physical features in West Europe.

Posttest written summary for intervention student six.

Written Summary

Write your summary of this subsection on the lines provided below.

There are many great and old cities in Western Europe. Three of them are London, Rome, and Paris. Here is some information on them.

First is London. Samuel Johnson wrote in the 1700s "When a man is tired of London, he is tired of Life.; For there in London is all that life can afford." That may be ture. London has many, many things, but is best known for its art galleries, museums, and theaters. Also, London's bankers, insurance writers, and shippers all do business with almost every country in the world.

Next is Rome. Rome is know as the Eternal City because its history dates back to long ago. It dates back to the time of Anicent Roman Civilization. It is home to the Vatican which is the headquarters of The Roman Catholic Church. It also houses the pope who is the leader of the whole Roman Catholic Curch.

The final city is Paris. It is the industrial center of France. It produces many goods including automobiles. It is also the center for art and culture in West Europe. The centers of Urban life are the cafes. They provide a place for people to meet, eat, and talk. Paris is a mix of old and new buildings. They may have middle aged churches next to modern day sky-scrapers.

These are some of the cities in Western Europe.

On the pretest summaries, intervention student four includes the three major land regions in Western Europe and gives some details about each. This student also includes details

about features that are not the focus of the passage. Students five and six appear to resort to listing and have difficulty knowing the most important information to include in the summaries.

As these posttest summaries demonstrate, after learning about rhetorical patterns in text, these students were able to write summaries that included the most important information structured to show the relative importance of the ideas. Although not the case with all students, these students used paragraphs to identify the beginning of a new topic. The summaries demonstrate that students were able to comprehend the main concepts of the text and the details that related to them.

The pre- and posttest written summaries for comparison group students four, five, and six are displayed in Figure 54.

Figure 54. Pre- and posttest summaries for comparison students four, five, and six. Pretest summary for comparison student four.

Written Summary

Write your summary of this subsection on the lines provided below.

The greate european consistof flat or flat, rolling land with some hills. Also westren Europe has the best farm land. The central uplands this region is made up with low mountains in plateas. Also most soil is not made from farming.

Posttest summary for comparison student four.

Written Summary

Write your summary of this subsection on the lines provided below.

My Summary about cities of westren Europe is that there are Churche and Skyscrapers most churches are Roman chathlicc. people go to Rome to see there master piece and art. Some of the largest cities are London, Berlin, Madrid, Rome, and Paris.

Pretest summary for comparison student five.

Written Summary

Write your summary of this subsection on the lines provided below.

Western Europe's mainland consists of the plains and mountain like the Alpine and Alps. The Alpine are made of several mountain chains- the sierra nevadia in spain the pyrenee and alps. The Alps have some of the highest mountains in Europe. The mainland of weste. Europe has three magor regions. The plain consists of flat rolling land with low hills. The great European plain stretches from northern Germany to central Europe and Russia. other parts of western Europe are well known for their physical features. Finland for example is known for it more then 60,000 lakes. Scotland is known for its long deep narrow lakes and funn shaped bays. That is western Europe's mainland.

Posttest summary for comparison student five.

Written Summary

Write your summary of this subsection on the lines provided below.

Some of the cities in Western Europe are Berlin, Madrid, Rome, london, and paris. Some info on them and why people come to them are because masterpieces or great works of art.

Pretest summary for comparison student six.

Written Summary

Write your summary of this subsection on the lines provided below.

Today I'm going to talk about some of western European cities. There full of interesting facts. The cities are Paris, London, and Rome.

Paris, is the first city I'm going to talk about. Paris, is the center of art, culture, and education. Paris, has factories in and near the city that produce a vary of goods and automobiles. There are lots of cafe's to where people like to meet and talk.

Rome, is the next city I'm going to talk about. Rome in Italy, dates back to the time of ancient Rome cilvilization. Since Rome is very old, it's called the eternal city. The coloseum still stands today as a symbol of Rome's past. The popes in Rome, made Rome the center of art, and education, as well as religion.

London, is the final city I'm going to talk about. London, still remains a lively city. It's known for it's art galleries, museums, and theaters. Bankers, Insurance writers, and shippers do buisness with almost every country in the world!

So, those are some interesting facts. I hope you learned as much as I did!

Posttest summary for comparison student six.

Written Summary

Write your summary of this subsection on the lines provided below.

Hello! I'm going to tell you about the Western european Mainlands. The three I'm going to be talking about is the Great European plain, the central uplands, and the alpine mountain system!

First is the Great European plain, it stretches from northern France, across Belgium, the netherlands and northern Germany, to central Europe and Russia. It's made of flat rolling land with low hills. This mainland has the best farming. Lastly, it's the most densly populated area!

Next is the Central uplands, it extends from, Portugal through southern France, to central Germany. The central Uplands are made by low mountains and platues. Most of the land is rocky, and most of the soil is not fertile enough for farming. Lastly, it has the most important water way, Rhine river, in western europe crossing through it! Lastly is the Alpine Mountain system, it covers most of the Southern part of western europe. Finally, its made up of mt. chains, Sierra Nevada in spain, pyrenees, alps.

The pretest summaries completed by comparison students four, five, and six displayed a wide range of abilities with regard to summarizing text. Student four wrote about two of the three regions in Western Europe with few details. After describing the Alps at the start of the summary, student five then states that there are three major regions in western Europe and then goes on to talk about the great European plain followed by other less important physical features. The summary has little organization that demonstrates an understanding of the key ideas in the text. Student six demonstrated understanding by clearly identifying the three cities to which the text referred and providing appropriate details for each.

The posttest summaries for comparison students four, five, and six were very similar to their pretest summaries. Students four and five showed little understanding of text organization which would indicate they had difficulty comprehending the text. Student six identified the key ideas and related details from the passage and presented them in paragraph form which demonstrated an understanding of the text. Interestingly, student six was from School D who had the highest scores on the Pennsylvania System of State Assessment tests. That this student should show proficiency in summary writing is not surprising as the mean score for written summaries for students from this school on the pretest was 4.1.

Analysis of Comprehension Quiz Data

As stated in chapter three, each student took three comprehension quizzes. The purpose of the quizzes was to analyze the impact of the intervention on the types of assessments traditionally used in social studies classrooms. Each quiz was made up of five multiple-choice questions and one recall essay. The multiple-choice questions and essay question required students to recall content from the text.

The multiple-choice questions were scored for the correct responses. I scored the essay using the Comprehension Quizzes Essay Scoring Rubric (see Table 7 in chapter 3) and then trained a reading specialist to score the essays. Inter-rater reliability for the essays was 80 %. Any discrepancies in scores were resolved through discussion resulting in 100% agreement.

I conducted t-tests to compare the means for the comparison and intervention groups for each question type for each quiz. Each t-test met the assumption for homogeneity of variance except for the multiple-choice analysis for quiz 3. Using the

equal variances not assumed value for that analysis, the test did not reach significance.

The results for comprehension quizzes by question type for each quiz are in Table 14.

Table 14

T-Test Analysis of Comprehension Quizzes Comparing Means by Quiz and Question

Type

Quiz	Question Type	Mean	SD	*p*
	Multiple Choice			
1	Comparison	3.69	1.26	.04*
	Intervention	3.33	1.19	
2	Comparison	4.20	.95	.00**
	Intervention	3.23	1.14	
3	Comparison	4.08	1.16	.88
	Intervention	4.06	1.03	
	Essay			
1	Comparison	2.39	.96	.85
	Intervention	2.36	1.02	
2	Comparison	2.89	1.04	.00*
	Intervention	2.47	.95	
3	Comparison	2.88	.92	.00**
	Intervention	2.00	1.05	

*p<.05, **p<.001

For the multiple-choice questions, the comparison group scored significantly better than the intervention group in two out of three quizzes. For the essay question, the comparison group scored significantly better than the intervention group in two out of three quizzes.

To gather an overall picture of performance on the question types across quizzes, I collapsed the data for the three quizzes for the multiple-choice questions and essays. I then performed t-tests to compare the means for the intervention and comparison groups by question type. The results for this analysis are in Table 15.

Table 15

T-Test Analysis of Comprehension Quizzes Comparing Means by Question Type

Question Type	Group	Mean	SD	*p*
Multiple Choice	Comparison	12.00	2.77	.00**
	Intervention	10.63	2.46	
Essay Question	Comparison	8.19	2.26	.00**
	Intervention	6.80	2.48	

*p<.001

Again, this data shows that the comparison group performed significantly better than the intervention group on multiple choice and essay questions.

Analysis of Think-Aloud Data

After the completion of the posttest, 28 students (14 from the comparison group and 14 from the intervention group) completed two think-aloud tasks where they were asked to make two graphic organizers; one using the content from a social studies

textbook passage and one using the content from a health textbook passage. Students were randomly selected for the think-aloud measure. The teachers reviewed the list of students from their classes for any students who might be extremely shy or quiet and, consequently, have difficulty engaging in a think-aloud task. Only one of 28 students was replaced by another student based on teacher recommendation.

Both the passages from the social studies and health texts were organized using the topical net rhetorical pattern. The topical net rhetorical pattern was chosen because this pattern was used frequently in the social studies text. I analyzed the think-aloud data in a number of ways. First, I looked for evidence that students transferred their knowledge of rhetorical patterns from the social studies to health texts. Second, I analyzed the verbal responses students made while constructing the graphic organizers. Third, I discussed three trends with regards to graphic organizer construction that emerged after reviewing the graphic organizers produced during the think-alouds.

Evidence of transfer. One of the reasons for having students construct graphic organizers from two different textbook passages was to determine if the students in the intervention group who received explicit instruction in rhetorical patterns could transfer knowledge of rhetorical patterns to a passage from a text different than the one they used during instruction. Table 16 shows how many students from both the comparison and intervention groups used and named the topical net rhetorical pattern when they constructed the graphic organizers for the social studies and health passages.

Table 16

Number and Percentage of Students who Used and Named the Topical Net Pattern in Think-Alouds

Group	Social Studies Text		Health Text	
	Number	Percentage	Number	Percentage
Used Topical Net Pattern Correctly in Think-Aloud				
Comparison	1	7	2	14
Intervention	11	79_a	11	79_b
Named Topical Net Pattern in Think-Aloud				
Comparison	0	0	0	0
Intervention	10	71_c	9	64_d

———

Note. [a]One student used the topical net but not correctly, two other students used a list or a four-square graphic organizer. [b]Three students used a matrix, a list or four-square graphic organizer. [c]Four students did not name the text pattern. [d]Two students did not name the text pattern, three students named the text pattern as a web chart, a list, or a matrix.

All but three students in the intervention group constructed a graphic organizer using the topical net rhetorical pattern to construct their graphic organizer to reflect the text content for both the social studies and health book passages. This result indicates that students were able to transfer their knowledge of rhetorical patterns to a text other than the one in which they learned the rhetorical pattern. As the notes for the table indicate,

intervention students who did not use a topical net pattern used either a list or matrix which are rhetorical patterns used to describe. By using these other rhetorical patterns, the students demonstrated they could discriminate between text written as description and text written using sequence.

Student thinking processes. The think-aloud recordings were transcribed and then broken into analysis units. Analysis units were defined as a phrase, sentence, or group of sentences that could be identified as a thought process or action taken in constructing the graphic organizer. The analysis units were then categorized. The transcriptions were read and an initial set of codes was developed for student responses. As responses were analyzed and reread using the constant comparison method (Glaser & Strauss, 1967), categories were added and refined to accurately identify the contents of each meaning unit.

To establish inter-rater reliability, a reading specialist coded 25% of the transcriptions. An inter-rater reliability level of 88.7 % was reached. The reading specialist and I discussed responses without matching codes and were able to reach agreement on 100% of the responses.

The students produced a total of 943 analysis units. The students from the comparison group produced 511 analysis units and the intervention group produced 432 analysis units which resulted in an average of 36.5 analysis units for each comparison group student and 30.9 for each treatment group student. Table 17 displays the codes for the responses and how many students made those responses.

Table 17

Code Response Numbers and Percentages for Think-Aloud Responses by Group

Code	Control		Intervention	
	Responses	Percentage	Responses	Percentage
GO name	13	2.5	27	6.3
Reason GO chosen	7	1.4	18	4.2
Unsure how to proceed with GO	1	.2	0	0
Reads, rereads, restates text	38	7.4	15	3.5
Detail inclusion rationale	41	8.0	18	4.2
Text features	0	0	2	.5
Intent to write detail	3	.6	6	1.4
GO progression	34	6.7	26	6.0
GO construction	80	15.7	76	17.6
Restating and writing	203	39.7	142	32.9
Text patterns in other texts	0	0	1	.2
Summarizes completion of GO	26	5.1	72	16.7
Questions	18	3.5	2	.5
Processing text	9	1.8	0	0
Rereads GO	5	1.0	2	.5
Teacher question/student response	17	3.3	9	2.1

Skimming text	10	2.0	4	.9
Student competency	0	0	1	.2
Additional information	0	0	10[a]	2.3
Missing element	0	0	1	.2
Unrelated to GO construction	6	1.2	0	0
Total	511	100.1	432	100.2

Note. The percentages do not add up to 100 due to rounding [a]These responses were made by one student.

In examining the data, I noticed large difference in analysis units produced by the comparison group as compared to the intervention group. In reviewing the numbers of codes, I found the differences in analysis units could be traced to the number of times students restated the text as they were in the process of writing information on the graphic organizer. To break this down further I looked at the restating and writing verbalizations produced by schools (Intervention: Schools A and B, Comparison: Schools C and D). I found that students in School B produced only 39 restating and writing verbalizations while the students in School A produced 103, the students in School C produced 98, and the students in School D produced 105. Of the 38 restating and writing verbalizations produced by students in school B, 13 were produced by one student.

One explanation for this discrepancy may be that students, while constructing the graphic organizer, found it difficult to verbalize at the same time due to cognitive demands. Given that School B was the intervention school with lower overall reading achievement on the PSSA and students had recently learned the process of identifying

rhetorical patterns to make graphic organizers, the students may have given up restating as part of their writing in order to complete the task. As the data indicates, 79% of the students in the intervention group were able to correctly identify the text pattern and construct graphic organizers to represent the content of the two passages.

Students from the comparison groups produced more than twice the number of analysis units about their rationale for including certain details than students in the intervention groups. Of the 41 detail rationale analysis units produced by comparison students, 19 referred in some way to the importance or lack of importance of the detail. For example, students said, "I picked the most important things from each one…" or "because that's not very important…" Other rationales given for including details included whether the fact was interesting (e.g. "seems interesting"), the need for people know the information (e.g. "I put that because like if you go to Greece then you could know like know that the mountains isolate…"), or simply liking the fact (e.g. "I like this one…"). Of the 18 detail rationale analysis units produced by the intervention group students, 12 were made by two students. Of these 12, all the utterances about rationale for inclusion except one had to do with the importance or relevance of the detail/s in the passage.

The difference in number and types of detail rationale analysis units may have occurred for a number of reasons. First, individual differences in comfort with and approach to the task more than likely impacted the type of responses students made. The fact that two students in the intervention group accounted for 12 of the 18 detail rationale analysis units supports this point. However, the instruction in rhetorical patterns may have enabled students to more easily discriminate between important and unimportant

information in the text. When students can identify rhetorical patterns in text, that knowledge helps them focus on the information that should be included in the graphic organizer to represent that rhetorical pattern. Consequently, students were able to identify critical information without, perhaps, feeling a need to justify why they included that information on the graphic organizer.

Students from the comparison group who completed graphic organizers also asked more questions about the process than students in the intervention group. Seven of fourteen students that completed think-alouds from the comparison group asked questions about graphic organizer construction (e.g. "can I skip that and go on to the next one?", "should I write that it's by the Pyrenees?", "should I write at the top?"). Students from the intervention group did not ask as many questions regarding construction perhaps because, based on the instruction they received, they knew how to proceed with the task.

Trends identified by analyzing think-aloud graphic organizers. In analyzing the graphic organizers that students produced during think-alouds, a number of trends emerged. First, the graphic organizers produced by students in comparison groups provided evidence that they recognized an organization in the text. The student who constructed the graphic organizer in Figure 55 identified the three peninsulas being described in the text.

Figure 55. Social studies graphic organizer showing student recognition of text organization.

Iberian	Apennine	Balkan
• Spain and Portugal share	• Boot shaped	• Greece at Southern tip
• Pyrenees iscolate it from the rest of Europe	• Taken up by Italy	• Balkia Mts. cover penihsula
• Andora in Pyrenees	• Mountians run the length of Italy	• Mts. Iscolate Greece from Northern countries in Europe
• Small	• Alps cut it off from Evrope's main land (Northern Italy)	
	• Alps cut it off from France, Switzerland, and Austria	
	• San Marino and Vatican City are inside Italy	
	• San Marino and VC are small	

The student who constructed the graphic organizer in Figure 56 identified the four parts of physical fitness being described in the text.

Figure 56. Health text graphic organizer showing student recognition of text organization.

While these graphic organizers are not in topical net form, they indicate that the student identified the main topic and related subtopics in the text.

Second, students from the intervention group adapted the graphic organizer of the rhetorical pattern to fit the content in the text. For example, the graphic organizer in Figure 57 was based on the passage from the social studies text and the graphic organizer in Figure 58 was based on the passage from the health text.

Figure 57. Graphic organizer for social studies text constructed by student participant during think-aloud.

The countries of Spain and Portugal share the Iberian peninsula

Iberian

The peninsula is isolated from the rest of Europe by a mountain called the Pyrenees

Western Europe's Peninsulas

Greece is at the bottom of the Balkan

Mountains cover most of the peninsula

Mountains isolate Greece from other countries from Central Europe

Balkan

Italy takes up almost all of the boot-shaped peninsula the Apenninine

This is a mountainous land

Apenninine

In the northern part of this peninsula, it is cut off by the Alps

Figure 58. Graphic organizer for health text constructed by a student participant during think-aloud.

supports bones
makes joints stronger,
helps you if you fall

can be measured as the amount of weight of lift you

Strength

the amount of force muscles apply when they are used

use when lifting, pushing, & pulling

fat is important to your health but to much can make it hard to stay fit

body comp.

compares the weight of your fat to the weight of your muscles, bones, + joints

four parts of physical fitness

Ability to do activities for more than a few min.

hearts lung-
the ability of your heart + lungs to work efficiently during exercise

endurance

muscular-muscles to work overtime

Topical Net Org.

helps you move, keeps you from getting hurt

flexibility

bend & twist joints easily

use when you bend, turn, + reach

The content in the social studies passage used for the graphic organizer in Figure 57 described three peninsulas in Western Europe. The graphic organizer clearly has three spokes, one for each peninsula. The content in the health passage used for the graphic organizer in Figure 58 described the four parts of physical fitness. The graphic organizer has four spokes, one for each part of physical fitness. The student who constructed these topical net graphic organizers was able to adapt the graphic organizer to fit the content of the text she was reading and yet still properly represent the topical net rhetorical pattern.

Students in the comparison group, however, seemed to try to make the content in the text fit the type of graphic organizer they chose to use. For example, the student who constructed the graphic organizers in Figures 59 and 60 used a four-square graphic

organizer. Four-square graphic organizers are used frequently to help students organize writing and are similar to the Frayer graphic organizer (Klausmeier, Ghatala, & Frayer, 1974). The graphic organizer in Figure 59 was based on the social studies passage that described three peninsulas and the graphic organizer in Figure 60 was based on the health passage that described the four parts of physical fitness.

Figure 59. Social studies text graphic organizer using four-square organizer.
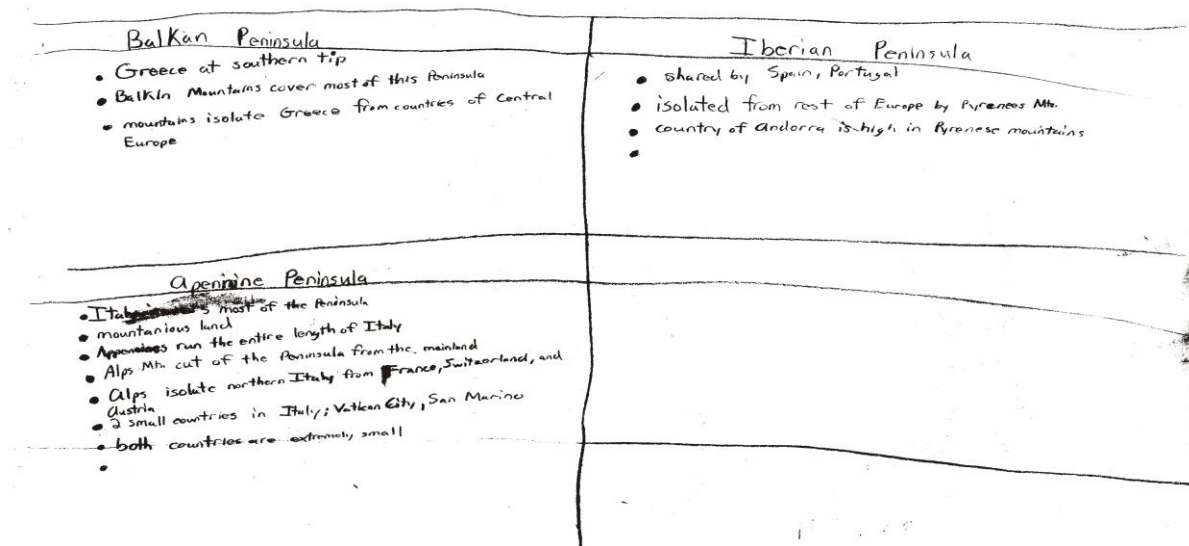
Figure 60. Health text graphic organizer using four-square organizer.
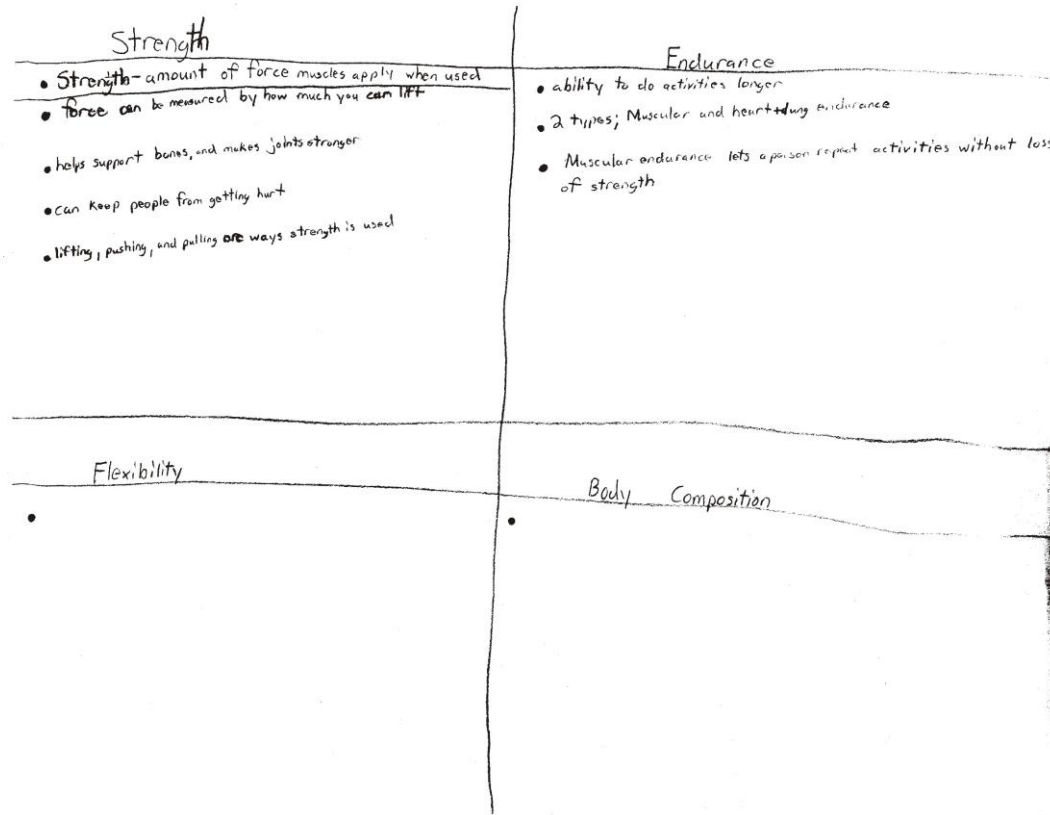
For the social studies passage, this student left the fourth square blank and never

explained what he might do with that square. On the health passage, although he didn't

finish filling in the details, this student was able to use all four squares because there

were four subtopics in the text. Interestingly, another student who used the four-square

for both passages wrote a conclusion in the fourth square for the social studies passage

but omitted the fourth subtopic in the health passage and said again she would use that

square for a conclusion. These students appeared to be limited by their knowledge of

graphic organizers. When they chose a type of graphic organizer for the task, they had to

decide what information to include so the content from the text would fit the graphic

organizer rather than adjusting the graphic organizer to reflect the content.

Students in the comparison group also made decisions about how much information they would include on the graphic organizer prior to reviewing the text. For example, one student from the comparison group, when describing how he/she was going to construct the graphic organizer, said "Then from each of the three web things…the peninsulas I'm going to put three more lines from those to tell what they include" Another student said I'm "gonna find like the two or three most important like details about the peninsulas". Although looking for the key details was important, this student made a graphic organizer that had only two details for each subtopic when there were other details that potentially should have been included. Seven other students either verbalized they were going to include a specific number of details or only included three details for the subtopics on their graphic organizers. In these cases, the students' understanding of the graphic organizer or perhaps how they had used a web or topical net-type graphic organizers in class may have influenced their choices about the information they would include as they constructed the graphic organizer rather than adapting the graphic organizer to ensure they included the key ideas from the text.

A third trend identified by analyzing think-aloud transcriptions and graphic organizers was that students in the intervention group seemed to be able to distinguish between details included in the text for interest and details that were related to the subtopic. In the social studies passage, when describing the Iberian peninsula, the authors mention the tiny country of Andorra and when describing the Apennine peninsula, the authors describe the tiny countries of San Marino and Vatican City. Only four intervention group students added details about these tiny countries to their graphic organizers where as all but three students in the comparison groups included these details.

The students' view that if the information is in the text it must be important was apparent. While struggling with the paragraph about the countries on the Apennine peninsula, one intervention student said, "Guess I'll include that (referring to the paragraph about the countries of San Marino and Vatican City) but I don't see what it has to do with peninsulas but still it's a whole paragraph of the section so…" While she did include the information, her response indicated that she was thinking about the relationship of details and their importance with respect to the subtopic.

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

In this chapter, I presented the results of three different measures, student-constructed graphic organizers, written summaries, and comprehension quizzes, to compare students who were given explicit instruction in rhetorical patterns and constructing graphic organizers using those patterns with students receiving routine social studies instruction on comprehension of social studies content. I found that the students in the intervention group were better able to construct graphic organizers using the appropriate rhetorical pattern to represent the content than students who received routine social studies instruction. The interaction of time and group was statistically significant with a large effect size indicating that the change in graphic organizer rubric scores from pretest to posttest was not the same for the comparison and intervention groups.

Additionally, the students in the intervention group were able to write more complete summaries reflecting the rhetorical pattern than students receiving routine social studies instruction. The interaction of time and group was statistically significant with a large effect size indicating that the change in written summary scores from pretest to posttest was not the same for the comparison and intervention groups.

On the comprehension quizzes I found that students in the comparison group performed statistically significantly better than the intervention group on the multiple-choice questions in quizzes 1 and 2. The comparison group also performed statistically significantly better than the intervention group on the recall essays on quizzes 2 and 3.

I found in examining the think-aloud data that a majority of the students who received the explicit rhetorical patterns/graphic organizer instruction were able to accurately identify the rhetorical pattern and construct a graphic organizer representing that rhetorical pattern for a passage in the social studies text. These students also demonstrated that they could transfer their knowledge of rhetorical patterns to a passage from their health textbook and construct a graphic organizer to accurately represent that content.

In chapter 6, I will discuss these results in light of the research questions as well as identify educational implications and suggest how this study can inform future research in the area of using instruction in rhetorical patterns and graphic organizer construction to facilitate student understanding of social studies text.

CHAPTER 6

DISCUSSION

Introduction

Students in middle and high school spend much of their academic day studying

specific subject areas such as social studies, science, math, or health. The source of the

content that students are expected to learn frequently comes from textbooks which can be

challenging for students to comprehend (Chambliss & Calfee, 1998). Textbooks usually

contain new content in lengthy passages using difficult vocabulary. Students entering

middle school who typically have had less exposure to expository text than narrative text

may not only struggle as they try to comprehend new content but also as they try to

understand how the information in the text is organized or structured.

Building on the idea that genres are specific ways of communicating in order to

meet goals, Chambliss and Calfee (1998) identified that the goal or purpose of expository

text is to inform, persuade and/or explain. They identified rhetorical patterns authors use

to communicate the purpose of their writing to the reader. They suggested that if readers

of expository text, such as is found in textbooks, can recognize the author's purpose and

the rhetorical patterns used to accomplish that purpose, the reader may be better able to

comprehend the text.

In this study, students learned to identify rhetorical patterns found in social

studies text and constructed graphic organizers to represent the content. The goal of this

instructional approach was to facilitate student comprehension of textbook content by

explicitly teaching students to identify rhetorical patterns. Specifically, the purpose of

this study was to examine the effect of providing sixth-grade students with explicit

instruction in identifying rhetorical patterns and using those patterns to represent content graphically on their ability to comprehend social studies textbooks.

My goal was to answer the following research questions:

1) How effective is explicit instruction in rhetorical patterns using student-constructed graphic organizers in comparison to routine social studies instruction in developing comprehension of social studies textbook content with sixth-grade students?

   a) How effective is explicit instruction in rhetorical patterns using student-constructed graphic organizers in comparison to routine social studies instruction in developing comprehension of social studies textbook content with sixth-grade students as measured by graphic organizer production?

   b) How effective is explicit instruction in rhetorical patterns using student-constructed graphic organizers in comparison to routine social studies instruction in developing comprehension of social studies textbook content with sixth-grade students as measured by written summaries?

   c) How effective is explicit instruction in rhetorical patterns using student-constructed graphic organizers in comparison to routine social studies instruction in developing comprehension of social studies textbook content with sixth-grade students as measured by comprehension quizzes?

2) How do students in the rhetorical patterns/graphic organizer group and the routine social studies instruction group respond in think-aloud tasks with social studies and health texts?

In this chapter, I will discuss each research question in light of the results from the study and how these results connect and contribute to related research. I discuss the

limitations of the study, implications for classroom instruction as well as examine how this study might inform future research.

<div align="center">Examining the Effects of Instruction on Rhetorical Patterns on</div>

<div align="center">Comprehension of Social Studies Textbooks</div>

In the first question and sub-questions, I asked how students who received routine social studies instruction compared with students who received explicit instruction in rhetorical patterns and constructed graphic organizers to represent that content on three different measures: graphic organizers, written summaries, and comprehension quizzes. I discuss each of these measures in the next three sections.

Student Comprehension of Social Studies Text and Graphic Organizer Construction

The results presented in chapter five demonstrated that students in the intervention group were statistically significantly better at accurately representing social studies textbook content in graphic organizer form after explicit instruction in rhetorical patterns than students in the comparison group who were receiving routine social studies instruction.

There are a number of reasons why the rhetorical pattern intervention may have enabled students to accurately display textbook content in graphic organizer form. First, the graphic organizers were directly tied to rhetorical patterns found in textbooks. As stated in chapter 1, students need instruction that enables them to relate the organization of content in textbooks to graphic organizers (Dunston, 1992; Griffin & Tulbert, 1995; Robinson, 1998). Because they received explicit instruction on rhetorical patterns, students in the intervention group were able to accurately identify the rhetorical pattern

that was used to structure the content in the textbook and construct the graphic organizer to represent that content.

Second, students were actively engaged in the process of constructing the graphic organizers. As documented by the observations conducted prior to implementing the intervention that were reviewed in chapter 4, student engagement with graphic organizers consisted of filling in empty spaces or blocks with information provided by the teacher. According to Simmons Griffin, and Kameenui (1988), filling in graphic organizers may not be much different than other instructional approaches. Tasks which require students to interact with the text by connecting ideas, rephrasing, or labeling appear to facilitate comprehension more than passive approaches (Doctorow, Wittrock, & Marks, 1978; Linden & Wittrock, 1981). The processes of rereading the text, identifying the rhetorical pattern, and constructing the graphic organizer appeared to be important factors in students being able to accurately represent the text content in graphic organizer form.

Additionally, students with a range of reading abilities responded positively to the intervention. Student performance on the Pennsylvania State System of Assessment (PSSA) was quite different for the students from the two intervention schools (2009: school A – 74% proficient, school B – 52% proficient). I think it is worth noting that the students in School B, despite having lower scores on the PSSA, were able to make gains in graphic organizer construction based on rhetorical patterns. Despite lower reading proficiency than students at School A, Students at school B were nevertheless able to identify the main ideas and supporting details by organizing the content according to the appropriate rhetorical pattern rather than using a default strategy such as listing (Meyer, Brandt, & Bluth, 1980). This result demonstrates that the intervention of teaching

students to create graphic organizers using rhetorical patterns appears to be powerful with students of varying reading abilities.

Student Comprehension of Social Studies Text and Written Summaries

In the second sub-question, I examined whether learning to identify rhetorical patterns in expository text would influence students' abilities to write summaries of text passages. Writing summaries can be challenging for students. When attempting to summarize text, students may list details, insert their own ideas, or simply copy from the text (Frey, Fisher, & Hernandez, 2003). Summarizing, however, helps students move beyond being receivers or memorizers of facts to synthesizers and organizers of information (Hood, 2008). The results presented in chapter five showed that students in the treatment group made statistically significant more growth writing summaries of social studies textbook content after learning to identify rhetorical patterns than students in the comparison group who were receiving routine social studies instruction.

The growth experienced by students in the treatment group in summary writing demonstrated the strength of the intervention. As stated, the number of students at School B performing at a proficient level on the PSSA for 2009 was 22 percentage points lower than the students in School A. Despite these lower reading achievement scores, the students in School B showed almost as much growth in summary writing (Mean: Pretest-2.58, Posttest-3.06, +.48) as the students in School A (Mean: Pretest-3.48, Posttest-4.02, +.54). While both schools showed significant growth, School B's performance is evidence of the effectiveness of the intervention in helping the sixth-grade students comprehend social studies text. While the written summary scores for students in the

intervention scores improved from pretest to posttest, the written summary scores of students in the comparison group dropped slightly.

The improvement in summary writing made by intervention students may be linked to the graphic organizer in two ways. First, a graphic organizer based on rhetorical text patterns may have helped students focus on the central or key ideas (Guastello, Beasley, & Sinatra, 2000). The task of identifying the main ideas and supporting details in text can be overwhelming to students. The intervention students, however, were able to identify the key points in the text by constructing the graphic organizer according to the rhetorical pattern. The students, having already identified the most important ideas from the text, could then focus on putting those ideas together into an accurate summary. The second way the graphic organizer appeared to facilitate summary writing was by providing a scaffold in the summary writing process (Wood, Bruner, & Ross, 1976). Scaffolding, whether provided by the teacher or through an activity, is an important factor in enabling students to do a task they otherwise would be unable to do on their own. The graphic organizer appears to have provided the students with the structure and key information needed to write an accurate and complete summary of the text passage. *Student Comprehension of Social Studies Text and Comprehension Quizze*s.

In the third sub-question, I examined what the effect of the intervention would be as measured by comprehension quizzes. The comprehension quizzes were given as a measure of comprehension because they more closely reflected assessments typically given in social studies classrooms.

The comprehension quizzes consisted of two types of recall questions: multiple-choice and essay. As I indicated in chapter five, the students in the comparison group

scored significantly better than the students in the intervention group on the multiple-choice questions and the essay question. There may be two reasons for this result. First, the primary focus of students in the intervention group was to learn rhetorical patterns and be able to display the content in the text using those patterns in graphic organizer form. The cognitive demands of learning such information may have, at least for the short term, reduced the ability of students to focus on specific content (Jong, 2010). Students in the comparison group would have worked specifically on content thus improving their performance on these types of questions.

Second, the multiple-choice questions and the essay in each quiz required basic recall of specific facts and information from the text. The way graphic organizers were used in routine social studies instruction supports this kind of learning. As described in chapter four, teachers used graphic organizers to display and communicate facts and information. There was little, if any, evidence of teachers explaining how the facts and details were related. As a result, students in the comparison group, despite having used or been exposed to graphic organizers, appeared to learn the facts on the graphic organizers in isolation rather than as a related group. As students in the intervention group learned to construct graphic organizers representing the content in the text, their focus was not on learning facts but on understanding how those facts related to each other within the context of the passage. Consequently, multiple-choice questions and essays requiring recall may not have matched the way students in the treatment groups were understanding and learning the content and may not have been appropriate measures of the kind of learning that was taking place (Simmons, Griffin, & Kameenui, 1988).

Student Comprehension of Textbooks as Evidenced by Think-Aloud Responses

Most students in the intervention group were able to identify the topical net rhetorical pattern and construct the graphic organizer for the both the social studies and health text passages when they completed the think-alouds. As I examined think-aloud responses of students from both intervention and comparison groups three themes became apparent.

First, students in comparison groups demonstrated in their graphic organizers that they had some knowledge of how text was organized. The social studies passage described three peninsulas in Western Europe and the health text passage described the four parts of physical fitness. Most students in the comparison group showed these subtopics in their graphic organizers. Once students had identified the subtopics in the text, they included details about each subtopic. However, in many cases, students resorted to listing these details underneath the subtopic.

Second, students who received explicit instruction in rhetorical patterns demonstrated they could identify the pattern used to structure the passage from the text and, while maintaining that structure, make adjustments to the graphic organizer in order to accurately represent the content. Intervention group students consistently displayed the three subtopics from the social studies passage about peninsulas and then appropriately adjusted their graphic organizer for the health text passage to include the four subtopics about physical fitness. While the rhetorical pattern was the same for both passages, the students were able to adjust the topical net pattern to accurately represent the content in the text. Comparison group students either made the content fit the graphic

organizer or did not review the content in the text to ensure they had included the necessary information.

Finally, intervention students' performance on the think-alouds indicated that the process of identifying rhetorical patterns and constructing graphic organizers to represent content may be transferred to texts from other domains. When students transferred the rhetorical pattern/graphic organizer strategy from a social studies to a health passage they needed to recognize the rhetorical pattern, recall the structure as well as accurately construct the graphic organizer.

According to the near and far transfer continuum developed by Barnett and Ceci (2002), the memory demands of constructing a graphic organizer according to a rhetorical pattern were greater than if the students had been told to make a topical net graphic organizer for the health passage. The task was more difficult because the students were not just following a specific procedure by being told to make the topical net but had to recognize what rhetorical pattern was used in the text and then construct the graphic organizer accordingly.

From a contextual standpoint, the features that make this a far transfer task are the knowledge domain was different (social studies to health) and that it occurred in a different setting than the classroom (one on one with the researcher). Contextual features such as time between end of instruction and the think-aloud task (one week), the function of the task (a school task done at school), social aspect (graphic organizers were constructed alone just as they were constructed independently by the end of the study), and modality (pencil and paper) all are factors that move the task closer to a near transfer task.

This identified level of transfer seemed appropriate for the study. The task required recognition, recall, and execution in a different domain but occurred shortly after the intervention ended using the same modality. If the transfer task had been too far removed from the original task, I might have had difficulty discerning at what level students could effectively apply the learned skill to another situation. As further research is completed with students at different grade levels who have gained more proficiency in using the strategy, other types of data might be collected to determine if transfer occurs over a longer period of time, to other functions (e.g. used at home as a study strategy), or to expository texts other than textbooks.

Three Important Conclusions Related to the Rhetorical Pattern/Graphic Organizer Intervention

After reviewing the results, I drew three general conclusions about the rhetorical pattern/graphic organizer intervention that was the focus of this study. First, a gradual release of responsibility model of instruction appeared to be a critical instructional factor in students learning to identify rhetorical patterns and represent text content in graphic organizer form. The results from the study support the use of explicit instruction. Although students in the comparison groups were exposed to graphic organizers in their classrooms and had some knowledge that text had a certain structure, very few were able to accurately represent that the organization of that text using rhetorical patterns. The students in the intervention group needed explicit instruction and modeling to identify rhetorical patterns, construct graphic organizers, and write summaries.

After students received instruction in rhetorical patterns and engaged in co-construction of graphic organizers and summaries with the teacher, they began to

constructed graphic organizers and summaries cooperatively. According to Vygotsky (1978), in order to develop inner speech, or an understanding of new ideas or constructs, a learner needs to participate with others as they engage in learning activities to be able to talk and hear others talk about the thinking processes used to complete a task. As students develop proficiency with a task, they begin to internalize the thinking processes they once heard from others and verbalized themselves. Students in the intervention group had the opportunity to verbalize their thinking as they interacted with the teacher and their peers as they constructed graphic organizers cooperatively. Such interaction allowed the students to verbalize their own thinking as well as hear the ideas of others. The process of moving from explicit instruction to working cooperatively with others appeared to facilitate student learning of the rhetorical pattern/graphic organizer intervention which provided support as students finally applied the strategy independently.

Second, instruction in rhetorical patterns appears to enable students to recognize which ideas in the text are the ones on which they should focus. Students who received instruction in rhetorical patterns were able to navigate a passage and accurately identify the key ideas and related details in the text as evidenced by their graphic organizers and summaries. Rhetorical patterns are a road map, of sorts, that helps direct student attention to the most important ideas in the text and provides organization to those ideas. Students who did not know rhetorical patterns seemed to have more difficulty finding that organization and, therefore, the key ideas.

Finally, as evidenced by student performance on the think-aloud tasks, students who learn to identify rhetorical patterns may be able to transfer that knowledge to other expository texts. As stated in chapter three, one of the advantages of examining how text

is organized using Chambliss and Calfee's approach (1998) is that the rhetorical patterns can be applied to all types of expository text.

Summary

In this study, sixth-grade students learned to identify rhetorical patterns and construct graphic organizers to represent social studies text content in order to facilitate comprehension of textbook content. The active and generative process of constructing graphic organizers using rhetorical patterns appeared to provide students with a range of reading abilities the means to comprehend the content in social studies passages. The graphic organizers assisted students in identifying main ideas and details from the text and appeared to provide a critical link between the text and being able to write a thorough and accurate summary. The fact that students who constructed graphic organizers did not recall facts and details as accurately as students who received routine social studies instruction may be the result of recall-type questions failing to match the kind of learning that the graphic organizer intervention promoted. The students were able to transfer knowledge of rhetorical patterns to a textbook from another subject area.

Strengths and Limitations

This study had a number of strengths. First, the results indicated that the rhetorical pattern/graphic organizer intervention can produce positive change in student learning. This change was particularly evident in two ways. According to the 2009 results on the Pennsylvania System of State Assessment (PSSA), fewer of the students in School B were proficient in reading than in school A. However, on both graphic organizer construction and written summaries the students in School B made significant growth. On the graphic organizer posttest, the students in School B actually scored higher than the

comparison students in School D who, of the four schools participating in the study, had the highest percentage of students score proficient on the 2009 PSSA. Also, the mean score for written summaries by students in the intervention group was more than a half point lower than students in the comparison group on the pretest. As a result of the intervention instruction, the students in the intervention group were able to overcome that difference and posted higher mean scores on the posttest than the comparison group on written summaries. The growth experienced by the students in the intervention group demonstrates that the rhetorical pattern/graphic intervention as presented in this study appears to positively impact student learning.

Second, the results of this study extend other research examining the impact of identifying rhetorical patterns and constructing graphic organizers on student comprehension of expository text. Rather than use trade books, as Newman (2007) and Russell (2005) did in their studies, I had students identify rhetorical patterns in textbooks. Since so much instruction in middle and secondary classrooms centers on textbooks and reading textbooks can be challenging for students, this study provides insight into how teachers may be able to support their students' comprehension of textbook content.

Third, the rhetorical pattern/graphic organizer intervention was taught in a whole classroom environment. Because the intervention took place in regular classrooms, students may not have gotten the amount of feedback and assistance as students in small groups may receive, such as in the small groups used by Newman (2007) and Russell (2005). The intervention students in a regular classroom setting, however, were still able to perform statistically significantly better than the comparison group classes. Such

evidence points to the strength of the intervention which included explicit instruction as well as scaffolded support through the teacher and other students.

A number of limitations are related to the specific focus of the study. First, the study was limited to sixth-grade. However, the evolving body of work indicating that students in third- (Newman, 2007), ninth- (Russell, 2005), and now sixth-grade appeared to have improved comprehension by learning to construct graphic organizers based on rhetorical patterns provides evidence that this type of intervention may be generalized to a wider range of ages. Second, out of the five expository text patterns that were taught to the students, only one (topical net) was used to assess the impact of the intervention in the pretest, posttest and think-alouds. The topical net text pattern was chosen because it is a structure frequently found in textbooks and students had more opportunities to identify the topical net pattern and construct a graphic organizer with this pattern during the study than the other rhetorical patterns. Although the students were not assessed on other text patterns, they demonstrated an understanding of those patterns by naming them (e.g. "I think it is a topical net or a list…") during think-alouds when they were identifying the text pattern of the passage in order to construct the graphic organizer. Third, the students in the study examined only text patterns found in a social studies text which was written to inform and any generalizations made must be limited to this type of text. Other text passages written to argue or explain were not included because they were beyond the scope of the study (Chambliss & Calfee, 1998).

Fourth, students in the intervention groups were provided assistance with reading the social studies text throughout the study. Since the goal of the study was to determine the impact of explicit instruction on rhetorical patterns using graphic organizers on

students' ability to comprehend the text, students were always supported in their efforts to read the text to ensure that any skill deficits in decoding or word recognition would not impede their efforts in identifying rhetorical patterns and constructing graphic organizers. The results, particularly for the school with lower reading achievement, most likely would have been different had this kind of support not been provided. However, if students are able to recognize rhetorical patterns in a textbook passage as they begin to read, that knowledge may act as a map and assist their comprehension as they look for content that fits the rhetorical pattern.

Finally, teachers and students could not be randomly assigned to comparison or intervention groups. I conducted observations which provided rich data about individual teacher's approaches to classroom management and instruction (see chapter 4). This data allowed me to show that the teachers in comparison and intervention groups were well matched with regards to instructional effectiveness and classroom management. In this study, if anything, the intervention groups were at somewhat of a disadvantage because neither teacher made frequent use of graphic organizers and one teacher's less-structured approach to classroom management could have negatively impacted students' abilities to learn the rhetorical pattern/graphic organizer intervention..

Directions for Future Research

The sixth-grade students who learned the rhetorical pattern/graphic organizer intervention in this study demonstrated that they could identify rhetorical patterns, construct graphic organizers, and write summaries of textbook content more effectively and accurately than students in the comparison group. Based on these results, there are a number of areas that need further examination.

First, this research focused on text that was written with the purpose of informing. Further research needs to be conducted that examines the impact of teaching students to identify how information is organized when text is written to persuade and/or explain. Chambliss and Murphy (2002) analyzed fourth- and fifth-grade students abilities to represent an argument structure from text and found that some students accurately represented the argument structure, others inferred the argument structure using a global representation of the text, and others made a list. Additional research building on Chambliss and Murphy's study of fourth- and fifth-grade students' abilities to represent an argument structure is needed as well as research examining how well students' understand the structure of text written to explain.

Research can be done that examines potential developmental trends related to identifying and using rhetorical patterns. In this study, students from sixth-grade could identify rhetorical patterns and construct graphic organizers to represent the content found in textbooks and third-grade students in Newman's study (2007) identified rhetorical patterns and constructed graphic organizers to facilitate comprehension with expository trade books. Research should examine whether fourth-grade students can learn the rhetorical patterns used to organize text written for description particularly because fourth-grade is a time when students begin to read and study textbooks more intensively (Boyle-Baise, Ming-Chu, Johnson, Serriere, & Stewart, 2008). Additional research can be conducted that examines the appropriate levels for teaching argument and explanation rhetorical structures to students in middle and high school.

A critical part of research in this area will be finding or developing measures that can accurately assess the type of learning that is taking place as students study rhetorical

patterns. Measures consisting of strictly recall questions may not capture the relational understanding students may gain by constructing graphic organizers to display the connection between concepts.

Finally, further research is needed that examines the potential for students to transfer the rhetorical pattern/graphic organizer approach to other expository texts. In this study, students were able to transfer their knowledge of the topical net rhetorical pattern to a textbook from another domain. Research needs to be done to see if students would transfer their knowledge of rhetorical patterns to expository texts other than textbooks and to environments other than in the classroom (ex. using it as a tool to study). The value of teaching this approach to facilitate comprehension of expository text could be increased if research demonstrated that students apply it in situations other than where the instruction occurred.

<div align="center">Implications for Educators</div>

The results from this study indicated that the comprehension of textbook content is facilitated when sixth-grade students received explicit instruction in rhetorical patterns and constructed graphic organizers to represent that content. This outcome has potential ramifications for content area teachers.

In this study, teaching the reading-related skills of identifying rhetorical patterns and displaying those patterns graphically appeared to facilitate learning of content. While some content area teachers feel that teaching reading-related skills takes time away from covering the material outlined in the curriculum (O'Brien, Stewart, & Moje, 1995), teaching such skills may actually assist students in more readily understanding and

learning that content. This study showed two important ways that the rhetorical pattern/graphic organizer intervention may enhance student content learning.

First, teaching students to display rhetorical patterns in graphic organizer form seemed to help them identify main ideas and details in textbook passages. Textbooks are typically the source of much of the content students are expected to learn in secondary classes and they contain large amounts of information. Some information may be related to the topic and some information may be included simply to create interest. Students can have difficulty sorting between main ideas and details that are not necessarily critical to understanding the topic. The rhetorical pattern/graphic organizer strategy has the potential to help students navigate and comprehend large passages of text. In the process of using the rhetorical pattern to construct the graphic organizer, students identify the information that completes the graphic organizer. As students construct the graphic organizer according to the rhetorical pattern they are sorting the key ideas and details from the information that is interesting but perhaps not necessary to learn. Not only have students identified key ideas and related details but they can also see the relationship between those ideas. Consequently, instruction focused on helping students read textbook content may actually enable students to identify important information as well as see how ideas are related.

Second, educators must also recognize, that by helping students learn rhetorical patterns, they may not facilitate comprehension of textbook content for their class alone. If additional research provides evidence that students can transfer knowledge of rhetorical patterns to different expository texts, then learning those rhetorical patterns may help students as they study expository texts from different domain areas. The

instructional time devoted to teaching these reading skills for one class may be multiplied across subject areas.

Conclusion

The textbook passages students are frequently asked to read in content area classes are often long and may present challenges even for a proficient reader. As students read textbooks not only are they faced with comprehending new and potentially difficult concepts but they may also struggle with understanding the way the information is organized in the text. Many students may benefit from support as they read textbooks. As the results from this study indicate, students who are taught to identify rhetorical patterns can recognize main ideas and details in textbooks in order to represent the content in graphic form as well as write accurate summaries. This evidence suggests that the support students need to navigate the lengthy passages found in textbooks may be provided by teaching them to identify the rhetorical patterns used to organize the content the content. As educators, we need to understand the potential struggles students may experience as they read textbooks and ensure they receive the kind of support the results from this research recommend.

APPENDIX A

Chambliss and Calfee Rhetorical Pattern Approach to Text Structure Analysis

The design of rhetorical patterns used in expository writing. (Chambliss & Calfee, 1998, p. 32) (Reprinted with permission.)
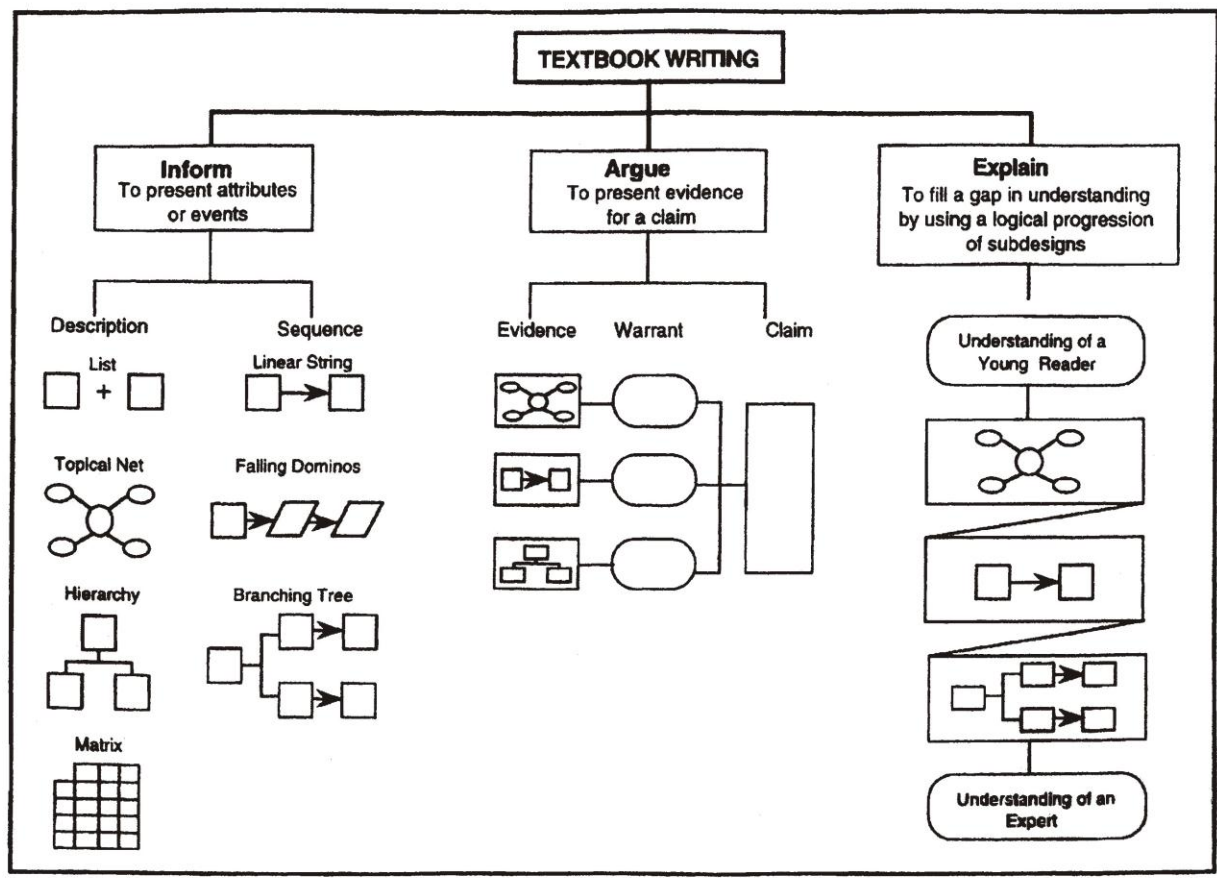
Figure 2.4   The design of the rhetorical patterns used in expository writing.

APPENDIX B

Description of Pilot Study

The pilot study was conducted for six weeks in April and May 2008 at a middle school in

a central Pennsylvania school district. The school has 790 students in 7 teams. The school

demographics consisted of 82 % Caucasian, 9% Black, 5% Hispanic, and 4% other with a

total of 12% receiving free or reduced lunch. In 2007, 84% of the students were

proficient on the Pennsylvania State System of Assessment.

The participants were two seventh-grade teachers and 310 students. Each teacher

instructed five social studies classes a day. For the purposes of the pilot, one teacher

taught the knowledge transmission model and the second teacher taught student-created

graphic organizers.

In order to gain experience in the middle school and teach the lessons for the

student-created graphic organizer group, I taught the first period class of student-created

graphic organizer group each day. My teaching then became the model the classroom

teacher used to teach her remaining four classes.

Two issues in the student-created graphic organizer class I taught made

implementing the intervention difficult. First, generally the class was organized so that

students needed only to review the study guide handed out before each test in order to

pass the class. As a result, there was little motivation on the part of students to attend

during class sessions. When I attempted to teach the graphic organizer intervention which

required engagement and interaction, students were resistant. Consequently, the lessons

that were to be models were presented in less than optimum conditions. Second,

classroom management in the class I taught was inconsistent which interfered with

intervention implementation. The teacher of the knowledge transmission group had more structured classroom management.

Students were given pre- and posttest measures on three chapters of content. Ten students from both the knowledge transmission treatment group and student-created graphic organizer groups completed two think-aloud tasks using social studies and science texts. Given that I was unable to provide adequate models of instruction for the graphic organizer group, my advisor agreed that completing the statistical analysis for the study would be fruitless.

Much was gained, however, through the pilot that informed the present study. First, it was evident to me after completing the pilot that teachers were needed that would create an environment where the intervention could be evaluated accurately. Three sixth-grade social studies teachers with whom I had previously worked and therefore had knowledge of their teaching style agreed to participate. Second, I was able to try different types of connection test questions and evaluate them in light of student responses on the pre- and posttests. Third, by doing the think-aloud transfer tasks, I was able to determine how I could improve the think-aloud task such as giving the students a specific goal such as constructing a graphic organizer.

APPENDIX C

Pretest and Posttest Forms A and B

Form A
(Western Europe's Mainland-pgs. 264-265)

Name _____   Date _____

Teacher _____   Period _____

Graphic Organizer

Construct your graphic organizer in the space provided below.

Written Summary

Write your summary of this subsection on the lines provided below.

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Form B
(Cities of Western Europe-pgs. 279-280)

Name _____   Date _____

Teacher _____   Period _____

Graphic Organizer

Construct your graphic organizer in the space provided below.

Written Summary

Write your summary of this subsection on the lines provided below.

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APPENDIX D

Comprehension Quizzes

Name _____   **Date**_____

Teacher   **Period** _____

Comprehension Quiz #1
Chapter 5-Mexico's Landforms

Part 1-Multiple-Choice

Directions: Circle the correct response to each question or statement.

1. Sierra Madre means _____.

    a.) an area of flat land

    b.) a volcano

    c.) Mother Range

    d.) a high elevation

2. The Isthmus of Tehuantepec connects what two geographic areas?

    a.) Texas and Mexico

    b.) Mexico and Central America

    c.) Guatemala and Belize

    d.) Mexico and California

3. The Baja California is an example of

    a.) A plateau

    b.) A sierra

    c.) An isthmus

    d.) A peninsula

Name _____   **Date**_____

Teacher   **Period** _____

4. Where is the Sierra Madre Occidental found in Mexico?

    a.) In the west

    b.) In the north

    c.) In the south

    d.) In the east

5. Mexico's two largest cities, Mexico City and Guadalajara, are found on what type of physical feature?

    a.) plateau

    b.) isthmus

    c.) sierra

    d.) peninsula

Essay

Describe 2 of the landforms found in Mexico and give an example of each type.

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Name _____   **Date**_____

Teacher   **Period** _____

Comprehension Quiz #2
Chapter 5-The Olmecs, The Aztecs, The Mayas, The Spanish

Part 1-Multiple-hoice

Directions: Circle the correct response to each question or statement.

1. Which group was known as the "mother civilization"?

    a.) Mayas

    b.) Aztecs

    c.) Olmecs

    d.) Spanish

2. What religion did the Spanish bring to Mexico?

    a.) Hindu

    b.) Protestant

    c.) Roman Catholic

    d.) Islam

3. The Mayan civilization was mainly located

    a.) on the Mexican plateau

    b.) on the Yucatan Peninsula

    c.) on the Baja Peninsula

    d.) in northern Mexico

Name _____   **Date**_____

Teacher   **Period** _____

4. Tenochtitlán was the capital city of which group?

   a.) Aztecs

   b.) Olmecs

   c.) Mayan

   d.) Spanish

5. Which civilization developed the tlaxcalli or tortilla?

   a.) Aztecs

   b.) Olmecs

   c.) Mayan

   d.) Spanish

Essay

Compare the Olmec and Mayan cultures. Tell two ways they were alike and two ways they were different.

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Name _____   **Date**_____

Teacher   **Period** _____

Comprehension Quiz #3
Chapter 5-Building a Nation

Part 1-Multiple-Choice

Directions: Circle the correct response to each question or statement.

1. What important event occurred in 1917?

    a.) Mexico became an independent nation.

    b.) Mexico solved its problems with the United States.

    c.) Mexico wrote a new constitution.

    d.) Mexico got a dictator.

2. How long can a Mexican president be in office?

    a.) two 2-year terms

    b.) one 6-year term

    c.) two 6-year terms

    d.) two 4-year terms

3. Mexico has a type of government known as a

    a.) parliamentary democracy

    b.) representative democracy

    c.) presidential democracy

    d.) dictatorship

Name _____   **Date**_____

Teacher   **Period** _____

4. Who began the revolution that finally brought democracy to Mexico?

    a.) Benito Juarez

    b.) Francisco Madero

    c.) Porfirio Díaz

    d.) Vicente Fox

5. The General Congress in the Mexican government consists of the Senate and the

    _____.

    a.) House of Representatives

    b.) Chamber of Deputies

    c.) House of Commons

    d.) Parliament

Essay

Describe the conflict that happened between Mexico and the United States described in this chapter. What was the end result of this conflict?

_____

_____

_____

_____

_____

_____

_____

Name _____   **Date**_____

Teacher   **Period**_____

Comprehension Quiz #1
Chapter 7-The Waters of South America

Part 1-Multiple-Choice

Directions: Circle the correct response to each question or statement.

1. The largest river system in South America is

    a.) the Magdalena River

    b.) the Orinoco River

    c.) the Amazon River

    d.) the São Francisco River

2. Which of the following is South America's largest lake?

    a.) Lake Titicaca

    b.) Lake Maracaibo

    c.) Río de la Plata

    d.) Lake Erie

3. An estuary is

    a.) the mouth of a river where salt and fresh water mix

    b.) a nesting place for birds in the Brazilian Highlands

    c.) the beginning of a river

    d.) a port for large boats

Name _____   **Date**_____

Teacher   **Period**_____

4. The Amazon River is an example of

   a.) an estuary

   b.) a tributary

   c.) a transportation corridor

   d.) a channel

5. What body of water does the Amazon River drain into?

   a.) Atlantic Ocean

   b.) Gulf of Mexico

   c.) Caribbean Sea

   d.) Pacific Ocean

Essay

Describe where Lake Titicaca and Lake Maracaibo are located and one important fact

about each.

_____

_____

_____

_____

_____

Name _____   **Date**_____

Teacher   **Period**_____

Comprehension Quiz #2
Chapter 7-The Earliest South Americans, The Incas

Part 1-Multiple-Choice

Directions: Circle the correct response to each question or statement.

1. The capital city of the Inca empire was

   a.) Mochicas

   b.) Machu Picchu

   c.) Cuzco

   d.) Pampas

2. The Tupí-Guaranís used what method of farming?

   a.) plowing

   b.) terracing

   c.) slash and burn

   d.) chinampas

3. What language did the Incas speak?

   a.) Spanish

   b.) English

   c.) Portuguese

   d.) Quéchua

Name _____   **Date**_____

Teacher   **Period**_____

4. In what area of South America did most of the early native people live?

   a.) Brazil

   b.) The Andes

   c.) The Caribbean

   d.) Columbia

5. Which group was the first known civilization in South America?

   a.) Tehuelches

   b.) Tupí-Guaranís

   c.) Chavíns

   d.) Incas

Essay

The Caribs/Chibchas and the Tehuelches were two early civilizations that lived in South

America. Describe two ways these early cultures were different.

_____

_____

_____

_____

_____

_____

Name _____   **Date**_____

Teacher   **Period**_____

Comprehension Quiz #3
Chapter 7-A Blend of People

Part 1-Multiple-Choice

Directions: Circle the correct response to each question or statement.

1. The demarcation line set by Pope Alexander the VI settled the land dispute

   between which two countries?

   a.) Spain and the United States

   b.) Peru and Brazil

   c.) Spain and Portugal

   d.) United States and Mexico

2. Most people in Brazil speak

   a.) Spanish

   b.) Portuguese

   c.) English

   d.) French

3. After exploring South America, Francisco Pizzaro founded which city which

   became the center of the Spanish government in South America?

   a.) Lima, Peru

   b.) Rio de Janeiro, Brazil

   c.) Bogota, Columbia

   d.) Quito, Ecuador

Name _____   **Date**_____

Teacher   **Period**_____

4. The title of the government official in South America who forced the native
   people to take Spanish names and speak the Spanish language was the

    a.) viceroy

    b.) president

    c.) senator

    d.) mayor

5. What native group's empire ended in South America as the Spanish conquered the
   land?

    a.) Portuguese

    b.) Incas

    c.) Mayas

    d.) mestizos

Essay

Describe the social class system that was set up by the Spanish during their rule.

_____

_____

_____

_____

_____

APPENDIX E

Observation Protocol Chart

Observation Record Sheet

Teacher   Observer

Date   Time   <u>10:10-10:53</u>   School

Time	Description of Activity	Teacher Actions	Student Actions
10:10-10:12			
10:13-10:15			
10:16-10:18			
10:19-10:21			
10:22-10:24			
10:25-10:27			
10:28-10:30			
10:31-10:33			
10:34-10:36			
10:37-10:39			
10:40-10:42			
10:43-10:45			
10:46-10:48			
10:49-10:51			
10:52-10:53			

APPENDIX F

Treatment Fidelity Checklist

Rhetorical Patterns Lesson Fidelity Checklist

Observer _____   School/Teacher Code _____

Date _____   Class Period _____

Please circle the appropriate Chapter number and write the lesson title, and subsection title below:
Chapter   5   7

Lesson Title   _____

Subsection Title   _____

Determine whether teacher is on Day 1, 2, or 3 of the subsection. Circle the appropriate Day at the top of the column. As you observe, initial the items in the column that occurred during the lesson.

Day 1	Day 2	Day 3
_____ Introduction or activating strategy _____ Introduction of new material, concepts, and/or vocabulary _____ Reading of text in pairs, chorally or small groups (not round-robin reading) _____ Discussion of content in lesson subsection	_____ Graphic organizer construction _____ Teacher modeling the construction process and thinking aloud to make her thinking processes available to students _____ Teacher co-constructing graphic organizer with students by eliciting their responses throughout the process _____ Students constructing graphic organizers in pairs; teacher circulating providing assistance where needed _____ Students constructing graphic organizers independently; teacher help given where needed	_____ Written summary construction _____ Teacher modeling the construction process and thinking aloud to make her thinking processes available to students _____ Teacher co-constructing written summary with students by eliciting their responses throughout the process _____ Students constructing written summaries in pairs; teacher circulating providing assistance where needed _____ Students constructing written summaries independently; teacher help given where needed

Appendix G

Rhetorical Patterns Introductory Lesson

<u>Rhetorical Patterns Introductory Lesson</u>

Dates: Wednesday, January 6, 2010 and Thursday, January 7, 2010

LEQ: What are the seven rhetorical patterns that can be used to organize textbooks written to inform?

Activating Strategy:

Display the brick wall picture. Ask the students what they notice about the brick wall. Students responses should include: there are red and blue bricks, the blue bricks are in a diamond shape or pattern etc. Stress to the students that the pattern created by the bricks is clearly visible to us. Now display the textbook passage. Ask the students to describe any pattern they see on this page. Student responses might include: there are words and lines, there does not seem to be any pattern. Stress to the students that looking at a passage like this can be overwhelming…there are lots of words and sentences….containing lots of information… Stress to the students that you understand that students see passages like this and they don't want to read it and it is often hard to figure out what is most important.

Tell the students that while there may be no pattern that can be seen visually, the information has some kind of organization or structure. Stress to the students that if they can recognize that structure it will be much easier to identify the important information that is contained in that passage. Tell the students that

today they are going to be introduced to the ways that information in their

textbook can be organized.

Teaching Strategies:

1. Tell students that textbooks are usually written for one of three purposes:

    to inform, to persuade and/or to explain. Show the rhetorical pattern figure.

    Explain that text written to inform tries to give the reader a picture or

    description of places, people, objects, or ideas. Tell students that text

    written to argue uses evidence to make a point and these points become

    the support for a belief or claim. Explain to students that text written to

    explain uses all kinds of evidence to move the reader from having the

    understanding of a beginner to the understanding of an expert. Ask

    students to think about their social studies book and these three purposes

    to inform, to argue, and to explain. Ask them to turn and talk about

    whether they think their social studies book was written to inform, argue,

    or explain. After students have had a minute to discuss with their

    neighbor, have them give responses and explain their thinking. Say to the

    students that the purpose of their social studies book is to inform.

2. Pointing to the appropriate place on the figure show the students that text

    written to inform uses either description by giving the characteristics of a

    person, place, idea, or object or sequence by providing information about

    events taking place over time. Pointing to the figure show that there are

    four ways that text that is written to describe can be organized: list, topical

    net, hierarchy, and matrix. Explain that there are three ways text written

using sequence can be organized: linear string, falling dominos, and branching tree.

3. Pass out the handout. Have students fill in the boxes at the top with "Inform" and the two subheadings "Describe" and "Sequence"

4. Explain to the students that you will be introducing each rhetorical pattern and showing them an example of that pattern from that textbook.

5. Follow these procedures as you introduce each rhetorical pattern:

   1) Have the student turn to the subsection of Provincial Authority on page 152 in their text.

   2) Read the subsection to them and then have them reread it.

   3) Explain to the students that this passage is organized as a list. Show the blank list graphic organizer and explain that a list is a group of facts or information one right after the other. These facts or details may not be closely related. Show the filled-in graphic organizer for this subsection.

   4) Have students fill in the first box under "Describe" with a list graphic organizer. Have students label this as a "list".

Repeat this procedure with the following text subsections and rhetorical patterns (the rhetorical patterns under the bolded line are sequence patterns):

Text Pattern	Description	Text Subsection	Page #
Topical Net	Central idea surrounded by a set of related details Each detail tells something about that central idea	Canada's Economic Regions	136-137
Hierarchy	Main idea with each level of details supporting the idea above but being less important	---	150
Matrix	A structure that compares people, places, or things based on the same attributes.	Canada's Early People	142-143
Linear String	Shows the timing of a series of events Shows one thing happening after another Time line	The French and the British	144-145
Falling Dominos	A single event starts a series of events with each event causing the next one	---	---
Branching Tree	Show two or more linear strings occurring at the same time These linear strings can be started by one event	The End of Communism	308-310

5.) Review patterns by describing one and asking students if they can

identify it on their handout.

Summarize:

Give students a 3x5 card. Have them draw a line down the middle. Have them

write the headings "describe" on one side and "sequence" on the other and write

two text patterns that go with each one.

APPENDIX H

Handout from Rhetorical Patterns Introductory Lesson

Name _____   Date _____

Teacher _____   Period _____

Text Patterns Used to….
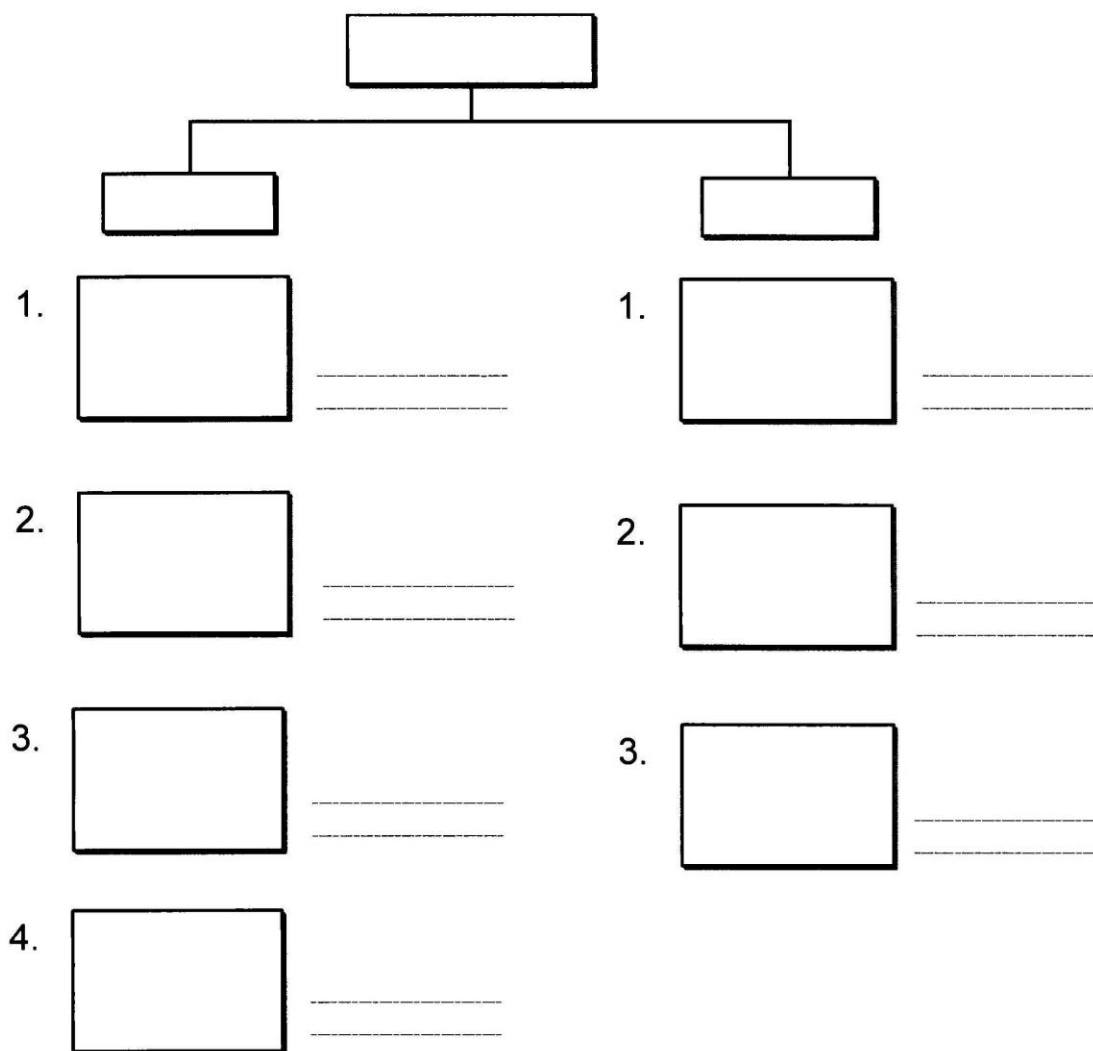
APPENDIX I

Graphic Representations of Rhetorical Patterns Posters

List

☐ **+** ☐ **+** ☐

Topical Net

Hierarchy

Matrix
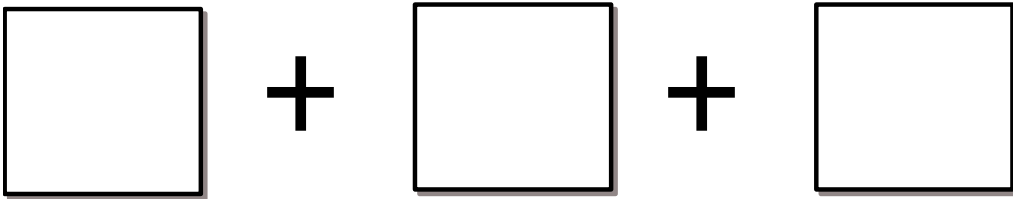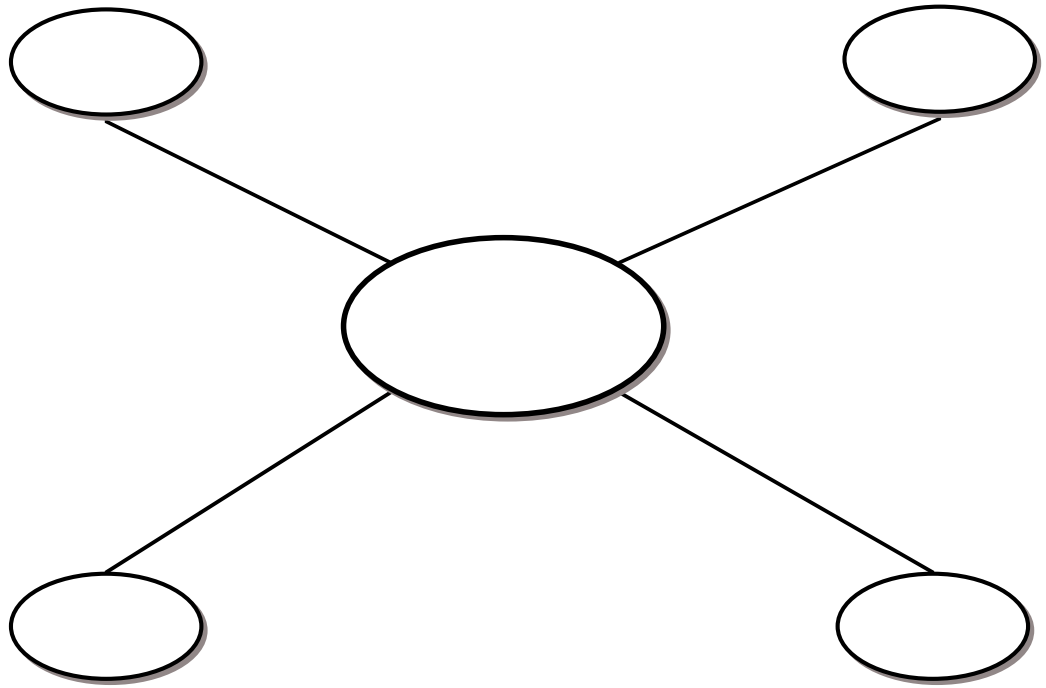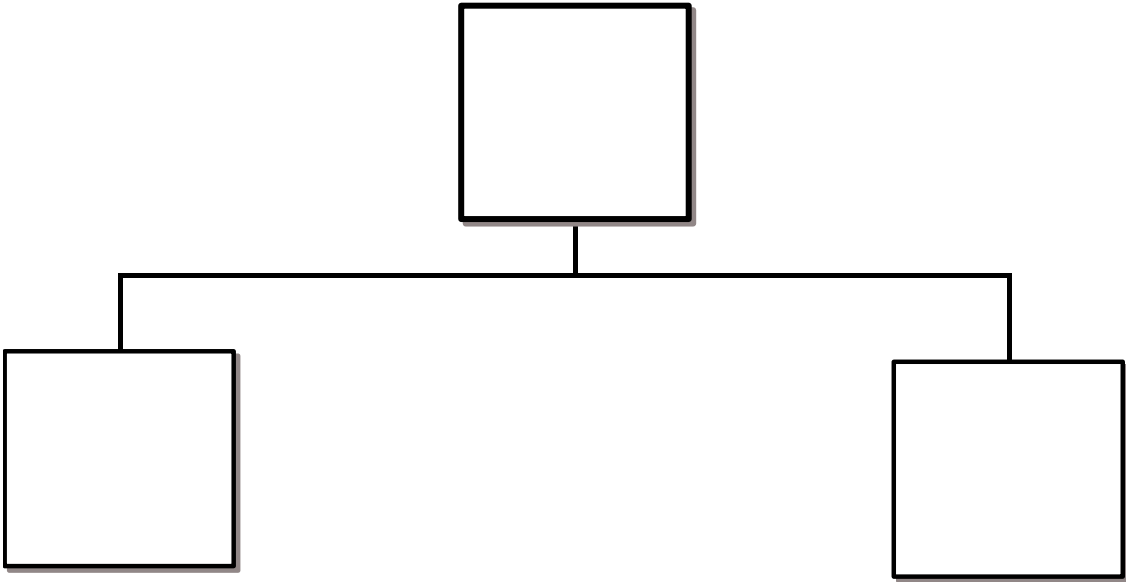
Linear String
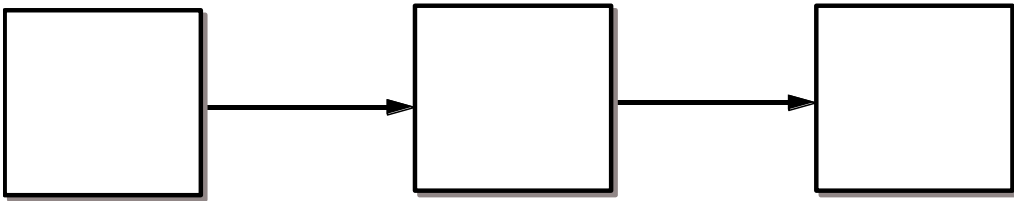
Falling Dominos
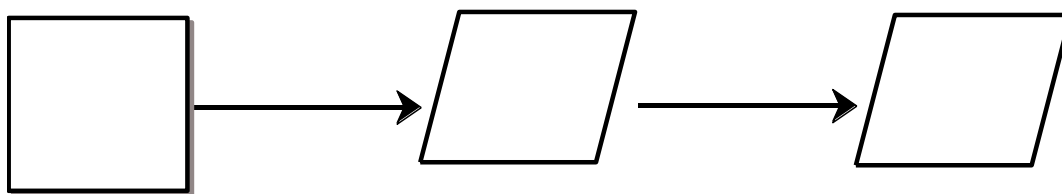
Branching Tree
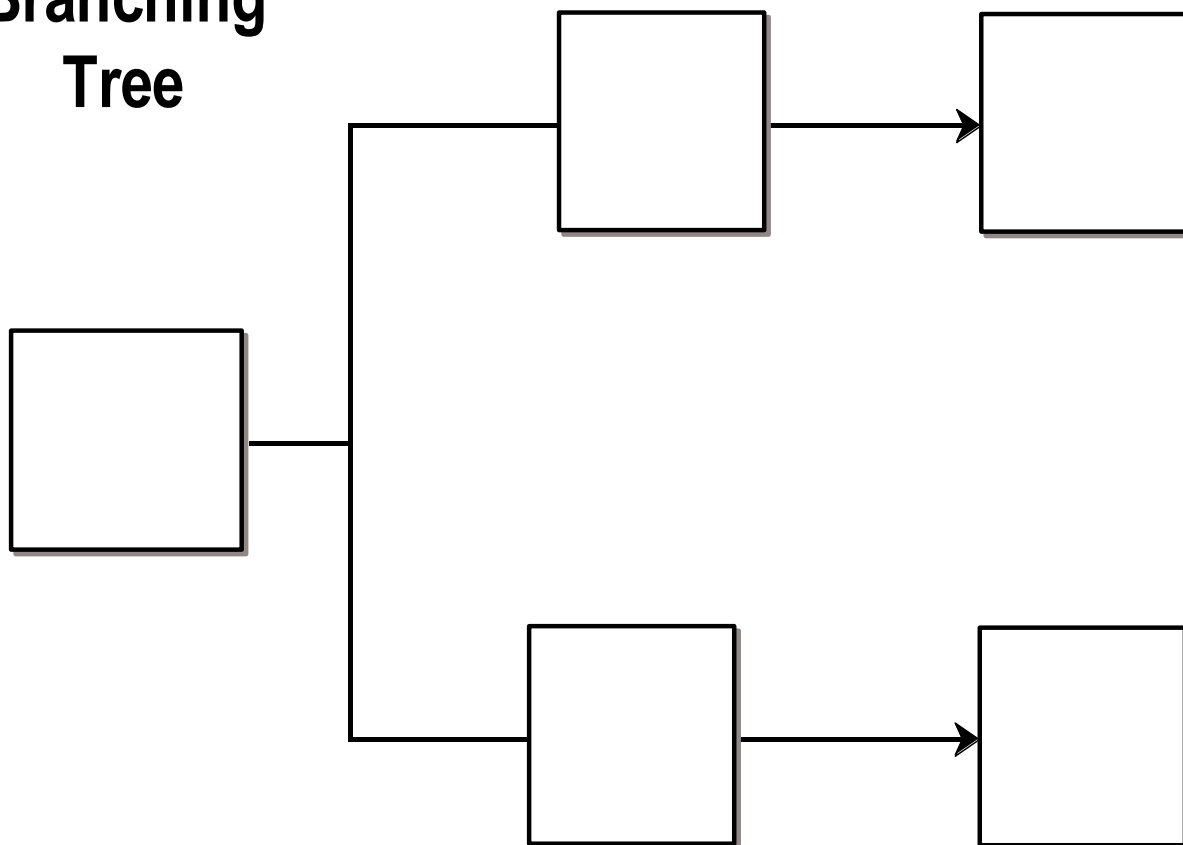
APPENDIX J

Example Rhetorical Pattern Graphic Organizers from Chapter on Canada and Eastern

Europe

List:
Canada Lesson 3-
Provincial Authority

Provinces have governing bodies	+	Voters elect provincial assembly	+	Premier is head of provincial government	+

Provincial government controls matters of education, property ownership, citizens rights	+	Some provinces demand more authority Separatists: Quebec Western Provinces
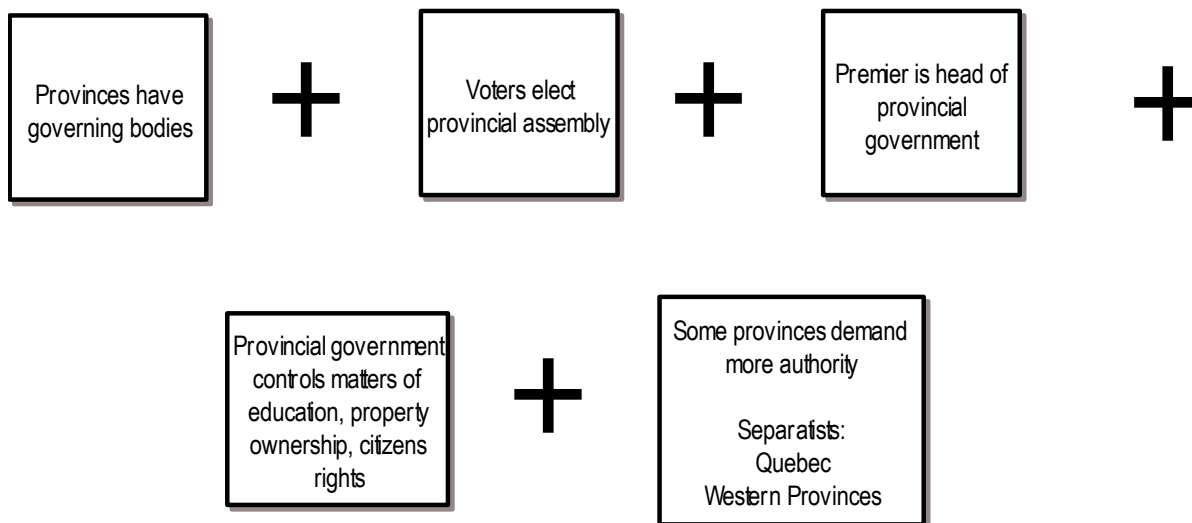
**Topical Net:
Canada, Lesson 1-
Economic Regions of
Canada**

no large cities

Yukon
Northwest
Nunavut

Territories
(no self-government)

mining

Nova Scotia
Prince Edward Is.
New Brunswick
Newfoundland
Labrador

**Maritime
Provinces**

Economic Activity
shipping
tourism
farming

**Economic Regions of
Canada**

**British
Columbia**

Major City
Vancouver

Economic Activity
-foresting
-hydroelectric
-recreation

**Prairie
Provinces**
"breadbasket"

Alberta
Saskatchewan
Manitoba

Economic Activity
-farming
-fossil fuels: coal, oil,
natural gas

Major Cities
Alberta: Calgary, Edmonton
Manitoba: Winnipeg

Economic Activity
manufactured goods

Quebec (French) **and
Ontario** (English)
"heartland of Canada"

Major Cities
Quebec-Montreal, Quebec Cit
Ontario-Toronto, Ottawa (capital
of Canada)

most people in the countr
live in this area

near major
waterways
-Great Lakes
-St. Lawrence
River

316

**Matrix:
Canada, Lesson 2
Part 1-Canada's Early People**

Early native Canadians	Where they lived	How they made their living	What they ate	Other information
Algonkins Hurons Iroquois Ojibwas Ottawas	-Appalachian Region -St. Lawrence Lowlands -Southern Canadian Shield	Used wood for: -houses -canoes		Individual groups spoke their own languages; had their own customs; traded with one another
Assiniboines Blackfeet	Plains	Hunted bison used for food and shelter	Buffalo meat	Used the rest of the buffalo to make tools and weapons
Haidas Nootkas	Western Canada	Used cedar trees to make shelter and canoes	Whales, sea otters, other sea animals	
Chipewyans Crees	Northern Canadian Shield		Hunted small animals	Difficult land to live in; too cold to farm
Inuit	Arctic Islands	Made shelter of animal skins and earth		Made houses out of snow if out hunting; used parts of animals for tools, weapons, artworks from animal teeth, antlers, bones, horns

Linear String:
Canada, Lesson 2-The
French and the British

1000 A.D.
Vikings
landed in
Newfoundland

→ 500 years →

1497
Italian explorer
Giovanni Caboto claimed
what is now
Newfoundland for
England

1535
Jacques Cartier
claimed northern land for
France;
called it the Iroquois word
"kanata" or Canada

1608
Samuel de Champlain
started the first French
settlement in Canada; it was
named Quebec

French Ruled for 150
Years

1754
French and Indian War
-war between French and
British

1763
Peace treaty gave British
control of New France; the
British named it Quebec
-part of treaty gave the
French the right to keep
their language, customs,
religion

1776
American colonists were angered
by the Quebec Act-felt they should
have more rights
-problems with the British led to the
American Revolution

Branching Tree

Eastern Europe- Lesson 3-The End of Communism

Poland → Lech Walesa worked to have democracy → 1989 Poland became democracy

Bulgaria Hungary Czechoslovakia → Peaceful demonstration → Governments promised changes and peaceful elections → Czechoslovakia divided into the Czech Republic and Slovakia in 1992

Romania → The leader Ceausescu ordered the army to stop demonstrations but the army sided with the people → End of 1989 Romania began moving toward democracy

1989 Soviet Union allowed countries to hold elections

Yugoslavia → 1991 Slovenia and Croatia voted for independence → Serbian people didn't want to live under the Croatian people so they asked their president to help fight them; Serbs took over 1/3 of Croatian land → 1992 Bosnia/Herzogovina (BH) declared independence; the Serbian president told people to engage in ethnic cleansing; Croati started taking over parts of B/H → 1995 United Nations stepped in to help; People in these countries began to work for peace → 1997 Kosovo declared their independence Yugoslavian president had the army go in and kill people → 2001 the United Nations arrests the Yugoslavian president for the terrible killings

APPENDIX K

Scaffolded Instruction-Rhetorical Pattern Chart

Chapter and Lesson	Subsection Title	Rhetorical Pattern	Level of Support Ch. 5-1st	Ch. 7-1st
Chapter 5 – Mexico Lesson 1	Mexico's Landforms	Topical Net	Explicit Instruction	Independent Construction
Chapter 5 – Mexico Lesson 1	Climate and Vegetation	Topical Net	Explicit Instruction	Independent Construction
Chapter 5 – Mexico Lesson 2	The Olmecs, The Maya, The Aztecs, The Spanish	Matrix	Explicit Instruction	Cooperative Construction
Chapter 5 – Mexico Lesson 3	Building a Nation	Linear String	Explicit Instruction	Cooperative Construction
Chapter 5 – Mexico Lesson 3	Mexico's Economy	List	Explicit Instruction	Independent Construction
Chapter 5 – Mexico Lesson 3	Mexico's Today	List	Cooperative Construction	Independent Construction
Chapter 7 – South America Lesson 1	Land Regions	Topical Net	Cooperative Construction	Explicit Instruction
Chapter 7 – South America Lesson 1	A Range of Climates	Topical Net	Cooperative Construction	Explicit Instruction
Chapter 7 – South America Lesson 1	The Waters of South America	Topical Net	Independent Construction	Cooperative Construction
Chapter 7 – South America Lesson 1	Rich in Resources	List	Cooperative Construction	Explicit Instruction
Chapter 7 – South America Lesson 2	The Earliest South Americans, The Incas	Matrix	Cooperative Construction	Explicit Instruction
Chapter 7 – South America Lesson 2	A Blend of People	Branching Tree	Explicit Instruction	Explicit Instruction
Chapter 7 – South America	Ways of Life	Topical Net	Independent Construction	Cooperative Construction

Lesson 2				
Chapter 7 – South America Lesson 3	Moves Toward Independence	Branching Tree	Cooperative Construction	Cooperative Construction
Chapter 7 – South America Lesson 3	South America Today	List	Independent Construction	Cooperative Construction

Sample Lesson Plans Given to Intervention Teachers at In-service Training

<u>Sample Lesson-Day 1</u>
(in Three Day Schedule)

<u>Introducing Text Subsection</u>

LEQ: What are the major landforms in Mexico?

Activating Strategy:

Have the students take out a piece of paper or hand them one. Have students crumble up the paper and then leave it on their desk. Read the first paragraph in lesson 1 of Chapter 5. Discuss the reason Hernando Cortez had for using the crumpled paper example for the king.

Teaching Strategies:

1. Read the subsection heading and have the students preview the subsection and pick out what they think might be the landforms in Mexico. Write these landforms on the board.

2. Have the students read the first paragraph and provide descriptive information about Mexico.

3. Read the next paragraph to them (the one beginning with "To the south…") and before reading ask the students to be prepared to tell what the landform is and some descriptors of it. Discuss the landform and have students find it on the map on page 173.

4. Have students read to end of the first paragraph on page 174 with a partner taking turns as they read. Tell them to be prepared to describe the next three landforms. After student have finished reading, Discuss each landform (peninsula, plateau, sierra) having students find them on the map.

5. Read the remainder of the section to the students and then have them read it in pairs. Have students identify the most important idea in the paragraphs they have just read. Discuss this with the students.

6. Have students turn and talk and name as many of the landforms of Mexico as they can.

Summarize: Give students a 3x5 card. Have them write landforms of Mexico on the top and their name on the back. Have them write at least 3 landforms found in Mexico.

Sample Lesson-Day 2

(in Three Day Schedule)

Constructing Graphic Organizer

LEQ: What are the major landforms in Mexico?

What is the rhetorical pattern for this section?

How do I create a graphic organizer to represent the information in this

section?

Activating Strategy:

Refer students to the rhetorical pattern posters displayed in the classroom. Remind the students that they already know their text is written to inform. Remind them that text written to inform either describes or sequences the content in the text. Ask them to turn and talk to a neighbor and decide whether the subsection they read yesterday was a text written to describe or written to show sequence. Have students respond. Tell students the text is descriptive and today we are going to construct a graphic organizer to show how the information is organized.

Teaching Strategies:

1. Point to the topical net poster and tell students that this text is organized using a topical net.

2. Remind the students that a topical net has a topic in the middle and is surrounded by details that are usually equal in importance.

3. Pass out blank paper to the students. Tell them that as you model how to make the graphic organizer on the board they are to make the same graphic on their paper. Stress that these graphic organizers will become their study guides.

4. Begin modeling and thinking aloud as you form the graphic organizer. Your thinking aloud might sound like this, "I am going to begin making my graphic organizer by drawing a circle in the middle of the paper. In this circle I am going to write 'Mexico's Landforms' because that is the topic of this subsection of text."

5. Continue by saying, "Since a passage organized by a topical net has a set of ideas or details surrounding it, I am going to start putting them in now. First, I see that one of Mexico's landforms is the 'isthmus'. I am going to draw a line from my center circle and draw a smaller circle at the end of it. In the smaller circle I am going to write 'isthmus'. I notice that the text tells me some other information about the isthmus so I am going to write that and connect it to the little circle with the word 'isthmus' in it. I see that isthmus is 'a narrow strip of land that connects two large land areas' so I will write it and connect it to the circle with the word 'isthmus' in it. I also see that an example of an 'isthmus' in Mexico is the 'Isthmus of Tehuantepec which connects Mexico to Belize and Guatemala' so I will write that outside the circle with the word 'isthmus' in it."

6. The next landform in the text is 'peninsula'. Continue modeling much the way you did for 'isthmus'. Continue with 'plateau' and 'sierra' (With the description of sierra, you will probably only include the information about the two mountain ranges and that these two ranges come together in a range of volcanoes in the south of Mexico. You will not however include the specific information about the volcano Popocatepetl. As you think-aloud doing this section, make sure you model why you did not include all that information. It might go something like this, "I am not going to include the information on Popocatepetl. I know that textbook authors give information or examples to help me understand the concept. This information gives more of an understanding of the 'sierras' but it is not necessary to put it on my graphic organizer."

7. When you have completed the graphic organizer have the students turn and talk and identify the landforms in Mexico.

Summarize:
Pass out cards with the steps of forming the topical net graphic organizer (1. Draw a circle in the middle and write the topic in the circle, 2. Draw a line from the circle and write one of the supporting ideas in a circle connected to the line, 3. Add any additional details to the supporting idea. 4. Finish adding other supporting ideas and related details.) Have students in small groups put the cards in order.

Sample Lesson-Day 3
(in Three Day Schedule)

Written Summaries

LEQ: How do I write a summary from a graphic organizer?

Activating Strategy:

Show students a summary of a text they recently read in language arts. Also show them a retelling that includes many unnecessary details. Ask which is the best summary of the text. When they have identified the summary, ask them to define a summary.

Teaching Strategies:

1. Have students review the graphic organizers they completed in the previous lesson. Explain that today you will be modeling how to create a written summary based on the graphic organizer.

2. Explain to the students that they will do three things when writing a summary based on a graphic organizer. First, they will use the information on their graphic organizer to write their summary. Second, they will write a topic sentence telling what the subsection was about. Third, they will turn the phrases with the supporting ideas or details from the graphic organizer into sentences.

3. Tell the students you will now model writing a summary for a passage written with a topical net text pattern. The first step when summarizing a topical net is writing a topic sentence that tells what the subsection was about. I will ask students, "Where on our graphic organizer do we see what this subsection was about?" Students should respond, "In the center circle of the graphic organizer." Then say, "To begin my summary, I will turn the phrase in the center of the graphic organizer into a sentence-'Mexico has different landforms.'" Write this on the chart paper.

4. Then say, "I will now turn each supporting idea into a sentence and include some information about it. For example, for 'isthmus' I will write 'An isthmus like the Isthmus of Tehuantepec is a narrow strip of land that connects Mexico and Central America.'" Model turning the next supporting idea into a sentence by saying and writing, "For 'peninsula' I will write 'A

peninsula like the Baja peninsula is a piece of land that is mostly surrounded by water.'"

5. Continue until all the supporting ideas with their details have been turned into sentences and added to the graphic organizer.

Summarize:

Have students turn and talk to their neighbor about the three important things to remember about a summary written from a graphic organizer: the information needs to come from the graphic organizer, the summary needs to begin with a topic sentence telling what the graphic organizer is about, and other supporting ideas and details need to be turned from phrases into sentences.

APPENDIX M

Codes for Social Studies Classroom Observations

Instructional Activity Codes, Names, and Description Chart

Code	Code Names	Description
GO	Using graphic organizers	A graphic organizer was used to facilitate instruction
INC	Introducing new content	New concepts or material is presented to students
MT	Management tasks	Consisted of taking attendance, collecting homework, preparing students for class
MM	Making maps	Filling in the countries, cities, major bodies of water on a map outline
RC	Research on computer	Using online sources to find information to complete a paper
WST	Completing worksheet or study guide	Filling in the information requested on a worksheet or blanks on a study guide
IA	Introductory activity	An activity to stimulate thinking about the content to be covered or review content previously covered
RT	Reading text	Reading passages from the text book
RW	Review work	Reviewing or going over the answers to a worksheet, homework assignment, or study guide
V	View video	Viewing video related to topic being covered
LA	Learning activity	An activity that provides students with an understanding of a concept or idea

D	Discussion	Interchange between teacher and students about a topic being learned
WR	Written response to Lesson Essential Question	Students respond in written form to the question that is/was the focus for a particular lesson
PRO	Work on project	Activities related to completing a long-term assignment
RT	Review for test	Activities to review content that students will be expected to know for a test
Q&A	Question and answer	Students respond to questions posed by teacher
GP	Group presentation	A group of students present information prepared cooperatively
V	RV	Vocabulary specific to the topic is reviewed
P	Preview activity or content to come	Teacher tells students what they will be doing either during that class period or the next class period
NI	Activity not identified	Description of the activity not provided

Teacher Activity Codes, Names, and Description Chart

Code	Code Names	Description
T Q+A	Teacher asking questions	Teacher asks questions of students
TI	Teacher giving instructions for activity or assignment	Teacher tells students specifically what he/she expects on task they are to complete
MT	Management tasks	Teacher engages in activities related to the organization of the class (e.g. attendance, papers)
TCAS	Teacher circulating and/or assisting students	Teacher is monitoring students work and/or Providing assistance where needed
TE	Teacher is explaining new content or concepts	Teacher is presenting information that is new to students
TLD	Teacher-led discussion	Teacher engages in interchange with students prompted by student questions
TO	Teacher engaged in other activities	Teacher is engaged in a non-instructional activity (e.g. talking to another teacher, checking email)
TRD	Teacher redirecting or re-explaining	Teacher provides additional information about completing a task or clarifies expectations
TLA	Teacher look ahead	Teacher provides information about what will be done during that class period or an upcoming class period
TDSB	Teacher dealing with student behavior	Teacher intervenes with a student or students regarding specific behaviors

TS	Teacher summarizes content	Teacher gives a synopsis of the content covered during that class period or a previous class period
TRSR	Teacher response to student written response	Teacher provides feedback on what a student has written

Student Activity Codes, Names, and Description Chart

Code	Code Names	Description
SCW	Students completing work	Students are engaged in completing work assigned by the teacher
SLP	Students listening and participating	Students are listening to teacher talk and responding to teacher by answering questions or following directions
ST	Students transitioning	Students are coming into class, getting ready or moving during class to engage in another activity
SP	Students participating	Students are engaged in a learning activity
VSB	Various student behaviors	Students are engaged in behaviors not appropriate for the classroom (e.g. throwing papers, calling out)
SL	Students listening	Student are focused on what the teacher is saying
SWP	Students working in pairs	Students are working with a partner to complete a task
RRR	Round robin reading	Students take turns reading portions of text while other students follow along
SRT	Student/s reading text	Students are reading text either individually or with another student
SQ	Students questioning	Student asks question related to a task or content
SCW	Students copying work	Students are copying information that is written on the board, Smart board or overhead

APPENDIX N

Instructional Record Sheet

Comparison Instruction Record Sheet
Teacher Name _____   **Period** _____

Chapter	Subsection	Day 1		Day 2		Day 3		
		Date	Activity	Date	Activity	Date	Activity	Assessment
5	Mexico's Landforms							
5	Climate and Vegetation							
5	Olmecs							
5	Aztecs							
5	Spanish							
5	Yesterday and Today							
5	Mexico's Economy							
5	Mexico Today							

7	Land Regions							
7	A Range of Climates							
7	Waters of South America							
7	Rich in Resources							
7	The Earliest South Americans							
7	The Incas							
7	A Blend of People							
7	Ways of Life							
7	Move Toward Independence							
7	South America Today							

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