Spring 2003

Graphic Organizers: What are the Effects of Writing, Attitudes Towards, and Usage of Graphic Organizers in a Fourth Grade Classroom

Wendy Rusin
The College at Brockport

Follow this and additional works at: https://digitalcommons.brockport.edu/ehd_theses
Part of the Elementary Education Commons, and the Language and Literacy Education Commons

To learn more about our programs visit: http://www.brockport.edu/ehd/

Repository Citation
https://digitalcommons.brockport.edu/ehd_theses/837

This Thesis is brought to you for free and open access by the Education and Human Development at Digital Commons @Brockport. It has been accepted for inclusion in Education and Human Development Master’s Theses by an authorized administrator of Digital Commons @Brockport. For more information, please contact kmyers@brockport.edu.
SUNY COLLEGE AT BROCKPORT

GRAPHIC ORGANIZERS: WHAT ARE THE EFFECTS ON WRITING, ATTITUDES TOWARDS, AND USAGE OF GRAPHIC ORGANIZERS IN A FOURTH GRADE CLASSROOM.

By

Wendy Rusin

A Thesis submitted to the Department of Education and Human Development in partial fulfillment of the requirements for the degree of Master of Science in Education

Degree Awarded:
Spring Semester 2003
Abstract

This study examined the effects of a graphic organizer, the Venn Diagram, on fourth graders' writing projects. The students' views and attitudes towards the effectiveness of the graphic organizer were considered and were determined by a student survey. This information was used to determine if the students felt the organizer improved their writing compared to a previously written essay that was created without the organizer. Students received direct instruction on several different types of graphic organizers. In February, the students took the New York State English Language Arts exam where the students wrote an essay based on two stories. There was a planning page provided on the test. In the past, many students have not used the planning page even after direct instruction involving the use of graphic organizers. The researcher observed whether the fourth grade students chose to use a graphic organizer independently on the ELA test. All previous data were used to interview the students to ask why they have or have not used any of the organizers taught in class. The results of the study demonstrated that graphic organizers were beneficial to the students' writing. The study showed that the overall essay scores had minimal increases, however, fifty-seven percent of the students' "organization" score did increase. The study also revealed that the students felt their second writing piece, with the graphic organizer, was the better piece. Eighty-one percent of the students felt the graphic organizer was the reason their writing improved. As a result of the students' attitudes towards graphic organizers, seventy-one percent of them attempted to use a graphic organizer on the planning page of the New York State English Language Arts Test.
Dedication

This thesis is dedicated to my family for their endless support, patience, and most of all, love.
Table of Contents

Chapter I - Statement of Problem ................................................................. 1
  Purpose ........................................................................................................... 1
  Introduction ................................................................................................. 1
  Need for Study ............................................................................................ 2
  Limitations .................................................................................................. 2

Chapter II - Review of Literature ................................................................. 3

Chapter III - Design ...................................................................................... 20
  Purpose .......................................................................................................... 20
  Research Question ........................................................................................ 20
  Methodology ................................................................................................. 21
  Subjects ......................................................................................................... 21
  Materials ....................................................................................................... 21
  Procedure ..................................................................................................... 21
  Analysis of Data ............................................................................................ 22

Chapter IV - Results of the Study ................................................................. 24

Chapter V - Conclusion and Implications ..................................................... 34
  Conclusion .................................................................................................... 34
  Implications for the Classroom .................................................................... 35
  Implications for Future Research ............................................................... 35

References ..................................................................................................... 37
Appendices........................................................................................................40

Appendix A .........................................................................................................41

Appendix B .........................................................................................................42

Appendix C .........................................................................................................43
CHAPTER I

Statement of Problem

Purpose

The purpose of this study was to examine the effects of a graphic organizer, the Venn diagram, on fourth graders’ writing projects, view their attitudes towards the use of graphic organizers, and observe whether fourth graders chose to use graphic organizers independently on the New York State English Language Arts Test (ELA).

Introduction

The underlying motivation for this study lies within fourth grade classrooms around New York State. Teachers are concerned with finding strategies that will help improve student writing. Many have turned to teaching graphic organizers to aid students in organizing their writing. They are finding that even though students are being taught how to use graphic organizers in class, most students are not using them independently on the “planning page” of the New York State ELA exam. This area needed to be focused on in order to determine if the students find graphic organizers beneficial to their writing. Another aspect was to see if students used a graphic organizer on the planning page of the ELA test and have them explain why they did or did not use an organizer.
Need for Study

With the increasing demands that are placed on students in the area of writing due to the challenges of state testing and curriculum requirements, teachers are searching for practices that will enhance their students’ writing. Teachers are turning to graphic organizers as tools to help students better prepare themselves during the planning or pre-writing stage of the writing process. Graphic organizers are tools that can motivate students by helping them become actively involved with the pre-writing stage, enabling them to see their ideas before they begin writing, and assisting them in organizing their thoughts so they can create organized and focused writing pieces.

Limitations

The researcher studied her own practices and that of her fourth grade students. The benefit of the study is that it will drive instruction for future classes. One limitation of this study is that the data are from a small testing-population of fourth graders, only twenty-two students.
CHAPTER II

Review of Literature

Definition of Graphic Organizer

Graphic organizers are visual representations of concepts that assist students with learning, reading comprehension, remembering, writing, and organizing important information. Vacca and Vacca (1999) stated, “graphic representations are visual illustrations of verbal statements” (p. 498). They determined that these visual aids helped learners comprehend and retain important information. In research, graphic organizers are known as advance organizers, graphic overviews, structure overviews, story maps, semantic maps, concept maps, clustering, matrixes, webs, cause and effect diagrams, and tree diagrams.

The Cornerstone of Graphic Organizers

Graphic organizers are a new strategy to some teachers and learners but they have been around since the 1960’s. Graphic organizers assisted students with organization of their thoughts and allowed them to then transfer these thoughts into writing. Since the 1960’s researchers have studied the effects that graphic organizers had on readers and writers. In 1968 Ausubel created the graphic organizer, originally called an advance organizer. They were used to link pre-reading information to existing schema, which enhanced the reader’s
acquisition of new knowledge (cited in Bowman, Carpenter, & Paone, 1998). This allowed the students to bridge the gap from their schema to new knowledge. These connections created a foundation for students to scaffold their information, which in turn, made the new information meaningful for students and easier for them to retain.

Hyerle (1995) defined graphic organizers as “visual tools that correspond to the thinking processes are useful in helping students organize, analyze, and convey knowledge, enabling them to read, write, and think better” (p. 85). Ausubel’s advance organizers have evolved and are known by many names such as advance organizers, graphic overviews, structure overviews, maps, webs, and now generally called graphic organizers (cited in Bowman, Carpenter, & Paone, 1998).

Theory Based

Graphic organizers have been researched and are based on schema theory. Dunston (1992) states, “although the theoretical base for graphic organizer research is not always clear-cut and well defined, the schema theory is frequently used to explain and test the effectiveness of organizers” (p. 58). Schema is defined as how the mind classifies and stores information based on prior experiences. Prior knowledge is thought to play an important role in the reading and writing process. As Dunston (1992) states:
Although the connections between schema theory and graphic organizers is not explicitly stated in the existing research, the implication is that key vocabulary terms or concepts form a learning task that are graphically displayed can activate prior knowledge more instantaneously and completely than abstract prose, as found in advanced organizers or other strategies designed to activate prior knowledge. Additionally, graphic organizers provide an organizational structure for the presentation of information in the learning task. (p. 59)

Graphic organizers are structured frameworks that help the readers and writers to organize their thoughts in such a way to bridge prior knowledge to the new concepts being learned.

Metacognition plays a role in explaining graphic organizers. Metacognition is defined by how a person thinks about his or her own thinking. Graphic organizers are a visual way to encourage students to think about their thoughts and ideas. In a study by Armbruster, Brown, & Palincsar, (1984), students were able to put their thoughts onto paper, which turned them from the abstract into concrete ideas. Once thoughts were put on paper, students were able to manipulate them into an organized, coherent framework. The importance of activating prior knowledge was emphasized. It was equally important for teachers to focus students on a main point which forced them to monitor their comprehension to test the amount of information that was understood (Armbruster, Brown, & Palincsar, 1984). Graphic organizers assisted students in all three points.
Multiple Intelligences

Organizers helped students develop mental images or models of the information that helped construct meaning and, in turn, it was easier to retain and recall information (Agnello, Jockl, Parson, & Velasco, 1998; Culbert, Flood, Windler, & Work, 1998; Hyerle, 1995). Teachers are striving to meet the individual needs of students in their classrooms and graphic organizers are especially important for students who are visual spatial learners as described by Gardner’s Multiple Intelligences (Agnello et al., 1998).

Howard Gardner, a Harvard Professor, was interested in the fact that people learn differently (Sadker & Sadker, 1997). He realized that people have different learning styles so he began to research the way people solved problems and/or created objects. As a result of his research, he identified nine different kinds of intelligences. One of these intelligences is called visual/spatial intelligence. Gardner (1983) defined the visual/spatial intelligence as the ability to form a mental model of the world around us. “Students using their visual/spatial intelligence can transfer the images in their minds to a new object” (Agnello, Jockl, Pearson, & Velasco, 1998, p.24). Graphic organizers were seen as a benefit for many students, especially those who are of the visual/spatial intelligence because graphic organizers were a “visual representation of knowledge, a way of structuring information, and of arranging essential aspects of an idea or topic into a pattern using labels” (Egan, 1995, p. 641). Organizers gave
students the ability to see abstract information in a concrete and organized manner.

**Do graphic organizers have an effect on reading comprehension of narrative text?**

Reading comprehension is a concern for most educators in today’s society. Teachers are finding that most students have the ability to decode words efficiently but have difficulties with understanding the meaning of the text. Brookbank, Grover, Kullberg, and Strawser (1999) have revealed that “students experience difficulties and even failure in reading comprehension and vocabulary skills” (p. 46).

Reading is seen as a process of constructing and developing meaning from printed text. Reading does not occur unless comprehension takes place (Agnello, Jockl, Pearson, and Velasco, 1998). Many students lack comprehension skills, which makes them unable to gain meaning from written text. Comprehension is seen as the process of how people use their prior knowledge and experiences and the author’s clues to find the author’s meaning of the written text (Brookbank, Grover, Kullberg, & Strawser 1999). Without this process, meaning is not achieved.

The solutions to these difficulties are based on brain research, learning skills, and organization (Brookbank et al., 1999). Graphic organizers provide a
way for students to organize the material and connect it to previously stored knowledge in the brain.

Thinking skills were needed to enhance comprehension. These included comparing and contrasting, sequencing, part to whole relationships, classifying, and developing analogies (Brookbank, Grover, Kullberg, & Strawser 1999). Graphic organizers were created to help make each of these skills visual for the reader. One example was the Venn diagram that made comparing and contrasting easy to organize. This was done with two circles that overlap. The overlapping section of the circles was used for the commonalties and the each side was used to note the differences.

There are many types of organizers available to reproduce but creating them can be an active learning experience for students. Graphic organizers are not only easy to create they are also adaptable. For example, a teacher can use a Venn diagram to compare and contrast two different stories, a movie and a story, two characters in a book, or even a comparison of two different religions in social studies. Using a diagram for different purposes will create the repetition students need to help them become independent users and it will help them use organizers across the curriculum.

Many researchers concentrated on how graphic organizers affected reading comprehension. In several studies, the researchers found that graphic organizers used for pre-reading, during, and post-reading, significantly increased
the reading comprehension of their subjects (Alvermann, 1981; Kirylo & Millet, 2000). These studies revealed that all students who used the organizers had increased their posttest scores because the organizers helped with organizing their thoughts, activating prior knowledge, making connections, which all led to increased comprehension and recall of important information. Quist (1995) stated that students with learning disabilities benefited from the use of graphic organizers because they needed visual representations. Graphic organizers were seen as structures that clearly formatted and organized information. These helped students relate information. Bowman, Carpenter, and Paone (1998) felt that the higher achieving students benefited because of the ability to be creative and the ability to manipulate the organizers. Their lower students also increased their scores and benefited from having the visual structure to learn and study. Researchers concluded, "graphic organizers enable the students to analyze, understand, and assimilated the information" (Bowman et al., 1998, p. 39).

Graphic organizers were successful with readers because students were able to organize the information, connect it with prior knowledge, and analyze literature. Moreover students were actively involved (Kirylo & Millet, 2000). It was demonstrated that graphic organizers helped most students with varied abilities increase test scores.

Irwin-DeVitis and Pease (1995) confirmed that students' understanding and retention of information increased when they were able to create images of
the ideas or information in their heads. This was because graphic organizers were used to help organize and/or emphasize main ideas in a brief and concise manner.

Researchers stated that students enjoyed using organizers because it created a "shift from passive to interactive learning" (Hyerle, 1995, p.87). Active learning involved the reader in the comprehension process that increased the students' ability to see connections, recall important facts, and encouraged the use of higher level thinking skills and reasoning (Brookbank, Grover, Kullberg, & Strawser 1999; Kirylo & Millet, 2000). Students were involved in the learning by filling out or creating organizers. Most students enjoyed using organizer because they found the organizers interesting. Motivation was important because it kept students interested and involved in their own learning. Egan (1999) agreed with the fact that student motivation is a huge factor. She felt that graphic organizers should be used in the classroom because they made "learning more meaningful" and suggested that they were a "source of delight for the learners" (p. 641).

Teachers who use organizers in their classrooms have seen them as useful tools to assess students' understanding. Organizers helped teachers find where students were confused or if the students had any misconceptions of the narrative text (Brookbank, Grover, Kullberg, & Strawser 1999; Hyerle, 1995). This gave the instructor the chance to eliminate the confusion and refocus the reader. When confusion was eliminated, there were fewer chances for the students to become
frustrated with the work. This type of assessment caught mistakes sooner and encouraged the students to be successful.

Graphic organizers facilitated students’ learning because they created visual representations of new information and created meaningful ways to strengthen comprehension. Students authentically comprehended what they were reading which encourages students to become independent readers and learners (Kirylo & Millet, 2000). The goal for students was to become lifelong learners.

**Do graphic organizers improve comprehension of expository texts?**

Why is comprehension of narrative text different than expository texts? Narrative texts are primarily focused on at the elementary level rather than expository texts. Students lacked the experience and exposure to expository texts, which created difficulties for students at the middle and high school levels. Expository texts were seen as difficult to read because they do not follow a consistent pattern as narrative texts do (Agnello, Jockl, Parson, & Velasco, 1998). Expository texts were more difficult to understand due to the abundance of factual information and vocabulary. Schell stated that there are “more concepts per word, per sentence, and per paragraph” (cited in Monroe, 1998, p. 538).

Not only are expository texts difficult to comprehend for these reasons but also because of the way the content areas are sometimes taught. In high schools, classes are sometimes taught in lecture form. Doyle (1999) stated that students
with learning disabilities might have difficulties with listening, writing, and spelling. Poor skills in these areas “will affect note taking while reading deficits may affect comprehension” (p. 9).

Research revealed that graphic organizers helped students visualize the difficult information in an organized way, which helped students with comprehension and retention of the content material learned (Alvermann, 1981). In Doyle’s (1999) research, graphic organizers were described as “visual displays that are used instead of lecturing and note taking” because the researchers found that “graphic organizers engage students in the learning process” (p. 19) and they “encourages student discussions and cooperative learning” (p. 16). Graphic organizers helped students by activating their prior knowledge, helping them select the main ideas and supporting details, and helping to show important relationships in expository texts (Culbert, Flood, Windler, & Work, 1998; Doyle, 1999; Hyerle, 1995). Boothby and Alvermann (1984) observed that comprehension was enhanced by the use of graphic organizers because their experimental group performed higher than the control group on comprehension activities and on the recalling of facts. These factors helped the students increase their reading comprehension while reading in the expository text.

It is difficult to maintain student interest in the content areas because the concepts are difficult. Many researchers agreed that graphic organizers were an important strategy to use because students were actively involved in learning and
it helped maintain students interest (Culbert, Flood, Windler, & Work, 1998; Doyle, 1999; Monroe, 1998). Bean, Singer, Sorter, and Frazee (1986) stated that the "students in graphic organizer groups displayed a significantly more positive attitude toward the strategy that they learned" (p. 167).

The research revealed that most students who were taught how to use graphic organizers showed high gains when pre-tests and post-tests were compared (Agnello et al., 1998; Culbert, 1998; Doyle, 1999). Agnello, Jockl, Pearson, and Velasco (1998) cautioned readers that the study did not guarantee retention of the material learned with graphic organizers. They also stated that a variety of graphic organizers were needed to be taught and caution should be used when choosing the appropriate type of organizer because some were confusing to students (Agnello et al., 1998).

**Do graphic organizers enhance understanding of vocabulary?**

Researchers encouraged the use of graphic organizers to help students learn the meaning of vocabulary words and to reinforce the definitions of key terms because their studies revealed that vocabulary knowledge is a significant component of reading comprehension (Brookbank, Grover, Kullberg, & Strawser 1999; Hyerle, 1995; 1999; Monroe, 1998). Graphic organizers were used to help develop meaning and to organize the definitions. Brookbank et al. (1999) stated that graphic organizers are used to connect prior knowledge that helped students
determine meanings of words such as synonyms, multiple meanings, and semantic relationships.

Students' vocabulary skills improved with graphic organizers. They were used to compare and contrast words and definitions, show part to whole relationships, hierarchical relationships, and increase understanding of the word's meaning. Students showed vocabulary mastery by communicating clear thought and expression by using the vocabulary in meaningful and accurate ways (Brookbank et al., 1999). Using graphic organizers encouraged active participation by the students, which increased interest and participation, which in turn increased understanding (Culbert, 1998).

Do graphic organizers help students organizing their writing?

Writing is seen as an important aspect of daily life (Berry, Guzy, Keelan, Kolinski, & Kuknyo, 1999). Due to the emphasis on the New York State ELA exam, writing has become a major issue in today’s schools. Teachers are scrutinizing students’ writing skills in order to find strategies that will enhance their final product. Since writing is perceived as a way to communicate thoughts, it is expected to be done in a clear and concise manner. Graphic organizers are seen as tools that can be used to enhance students' writing pieces.

Writing is a complex process. It takes practice to become an independent writer (Harrington, Holik, & Hurt, 1998). The process contains four steps:
prewriting, drafting, revising, and publishing/sharing (Meyer, 1995). Meyer (1995) stated that the most important step is the prewriting phase because this is when the authors decided on the topic, which led them to the related details or the sequencing of events. This step in the process showed students how their ideas or information are related. Graphic organizers were used in the pre-writing step and helped the students organize their thoughts while showing an understanding of the concept before doing the actual writing (Brookbank, Grover, Kullberg, & Strawser 1999; Drapeau, 1998; Harrington et al., 1998).

The graphic organizer was seen as a visual representation that allowed the writer to see his or her thinking (Harrington, Holik, & Hurt, 1998). Graphic organizers gave the author a chance to logically sequence his or her ideas while maintaining focus on a main topic and let the writer see if anything important is left out before the actual writing commences (Berry, 1999; Harrington et al., 1998).

The benefits of using graphic organizers in writing are numerous. Many students found it difficult to get started on a writing project. Graphic organizers provided motivation by helping the writers become actively involved with the planning process and they were able to visually see their ideas before they began writing (Drapeau, 1998; Harrington et al., 1998). Graphic organizers such as semantic mapping helped students organize their thoughts, which in turn assisted in creating an organized and focused writing piece (Drapeau, 1998; Harrington et
al., 1998). "Semantic mapping... shows students how ideas and information on specific topics are related and organized" (Meyer, 1995, p. 14). Most researchers found that students who used graphic organizers significantly improved their test scores (Berry, 1999; Harrington et al., 1998; Hyerle, 1995). They also stated that this writing strategy benefited students with wide abilities and learning styles.

One researcher conducted a study with second graders and found that statistically there were no significant differences between the group with the organizer and the one without (Daniels, 1999). However, Daniels stated that he observed more descriptors in the writing of students who used the graphic organizer. He also noted that the students with the organizers wrote more words per sentence than the group without. Some questions that emerged from this study include: Are the students old enough to use graphic organizers? Have the students mastered this device? Were students ready to use it on their own?

Berry (1999) cautioned the readers about the importance of teacher modeling. It is extremely important for the students to have guided practice before trying organizers on their own. Students need to have repeated exposure to graphic organizers to use this strategy independently. Students need to learn that there are different types of organizers for different activities because each has a specific purpose and some organizers are more confusing and difficult for students to use.
Ellis (1994) encouraged teachers to incorporate both teacher created and student created organizers into their plans. This helped the students become independent in creating and using the organizers in appropriate ways. Ellis emphasized the importance of teaching, modeling, co-creating, and then finally giving the students an opportunity to create and use the organizers independently. Graphic organizers can be wonderful tools for students but only if they are taught adequately and the students have mastered the process.

Merkley and Jefferies (2000) agreed that graphic organizers help students comprehend and recall information. Their concern remained with the implementation in the classroom. They suggested that the teacher should “verbalize relationships among concepts expressed by the visual, provide opportunity for student input, connect new information to past learning, make references to the upcoming text, and seize the opportunity to reinforce decoding and structural analysis” (p.350). Introducing graphic organizers in this manner enhanced students’ comprehension of a text.

Conclusion

Graphic organizers were seen by most researchers as a valuable tool that improved reading comprehension with narrative and expository texts, improved vocabulary, and to help create more organized and detailed writing pieces. This information was very valuable because it implied that organizers could help
students with varied abilities, in all areas of study. Most researchers’ studies revealed that when graphic organizers were used correctly, students’ scores increased in the areas of comprehension and writing.

Classroom Applications

Graphic organizers were seen as a great strategy to incorporate into the classroom. They were beneficial to students with a wide variety of abilities and learning styles. Research has proven that graphic organizers helped students increase their reading comprehension, vocabulary skills, and writing skills.

The teacher’s role was very important to the students’ success. Teachers carefully selected the organizer to make sure that it suited the intended purpose. Some organizers were too difficult to use and confused students. It was better to introduce students to basic organizers and over time increase the variation and complexity of the organizers. The teacher also needed to carefully model the use of organizers. Once again, the teacher started off with a basic example and modeled not only the steps in how to fill out the organizer but also how to use the information once it is there. Will it be used for recalling information, as a study sheet, or as a pre-writing form? Once the teacher modeled the procedure, the students attempted it during a guided practice. After the students were comfortable, they attempted to use the organizer independently.
Teachers wanted their students to be successful readers and writers. Graphic organizers appeared to be a strategy that helped improve the quality of students’ work. This in itself was enough of a reason to incorporate the use of organizers in the classroom.
CHAPTER III

Design

Purpose

The purpose of this study was to examine the effects of a graphic organizer, the Venn diagram, on fourth graders' writing projects, view their attitudes towards the use of graphic organizers, and observe whether fourth graders chose to use graphic organizers independently on the New York State English Language Arts Test (ELA).

Research Questions

1. What are the effects of a graphic organizer, the Venn diagram, on students' writing when measured by a rubric?

2. What are the fourth graders' attitudes towards graphic organizers as measured by a survey?

3. When given the ELA test, will students use the graphic organizers as a prewriting tool?
Methodology

Subjects

The subjects of this study consisted of twenty-two fourth grade students from a rural elementary school. The subjects consisted of thirteen males and nine females with varied abilities.

Materials

The materials for this study included several short stories, effectiveness surveys, writing rubric, Venn diagram, various graphic organizers, ELA tests, and student interviews.

Procedures

This study began with students independently reading two short stories and creating a written essay comparing and contrasting the two pieces without a graphic organizer. The teacher then introduced and modeled how to use a Venn diagram to compare the two stories. Students had the opportunities to practice using the diagram. The students then independently read two different short stories and were required to use the Venn diagram to organize their thoughts before writing the second essay.

Once the essays were completed, students met in groups of two to three and compared the two essays. They decided which one was of better quality, the
one with the organizer or the one without. Once the students completed the discussion they individually fill out an “effectiveness survey.” This survey was used to assess students’ attitudes towards the use of the graphic organizer. The survey determined if they felt the second essay improved from the first due to the use of the organizer.

The teacher continued teaching various forms of graphic organizers to reveal that there are different types for different outcomes. In February, the students took the NYS 4th grade ELA test. Once the tests were completed, the teacher looked at the “planning page” before the extended response and observed if the students used a graphic organizer. The teacher then interviewed every student and asked why he or she did or did not use an organizer, especially if they felt the organizer was useful in the previous activities.

Analysis of Data

The test data were analyzed in various ways. At the beginning of the study, the essays were graded on a four-point rubric to compare which written essay was of better quality. Then the teacher reviewed the student surveys to see what their attitudes were towards the graphic organizer. This information was compiled and saved in order to compare it with the student interviews that occurred after the NYS ELA test. The two surveys were used to see if there was a
discrepancy between the students’ attitudes and if they actually chose to use an organizer on the test and their reasoning behind their choices.
CHAPTER IV

Results of the Study

Purpose

The purpose of this study was to examine the effects of a graphic organizer, the Venn diagram, on fourth graders' writing projects, view their attitudes towards the use of graphic organizers, and observe whether fourth graders chose to use graphic organizers independently on the New York State English Language Arts Test (ELA).

Essay Scores

After the students completed the two essays, each was scored on a four-point rubric that focused on content and mechanics. The graph below shows the number of students that participated and the scores of the two essays. The first essay was without the use of the graphic organizer and the second essay was written with the required organizer.

Figure 1. Comparison of Essay Scores
The scores were then compared to see if the graphic organizer increased the overall essay scores. Using a comparison of the first and second essays, it is shown in Figure 2 that there were six students, or 29% of the class, that increased their scores by one point on the rubric. The results showed that 71% of the students' overall essay scores did not increase. The increases in the scores were minimal and there were no decreases in the scores and improvement was seen in the organization of the essays.

Figure 2: Results of Total Essay Scores

![Results of Total Essay Scores](image)

Even though the results of this section of the study revealed a small increase in overall scores, the researcher noticed that the organization of the essays did improve. This was seen because one area of the set criteria on the rubric was "organization." The researcher then focused on just the organization score. This was done to find out if the organization score directly correlated with the overall score of the essay. Figure 3 shows the number of students, their scores in the area of organization, and the comparison between the first and second
essays. This reveals that twelve students made gains in organization when they were required to use the graphic organizer.

Figure 3: Comparison of Organization Scores

In Figure 4, the results of the organization scores reveals that twelve students increased their scores. Eleven students, or fifty-seven percent of the class, increased their scores by one point on the rubric and one student’s score increased by two points. Although there were no changes in forty-three percent of the students’ scores there were also no decreases in the scores. This information has shown that students’ writing can increase in organization but not necessarily increase the overall rubric score.
The results revealed that graphic organizers increased the scores for more than half of the essays written by this class. The other finding was that no scores were lowered due to the use of the graphic organizer. The number of students that the organizer helped was not as high as anticipated but it was seen as an improvement as well as an incentive to continue with the usage of graphic organizers in the classroom.

**Results of Students' Surveys**

**Students' Thoughts About Their Essays**

After the essays were completed, students were given the chance to look them over, discuss their thoughts on the two essays in small groups, and were then required to fill out a student survey that revealed their thoughts and attitudes towards their essays and the use of the graphic organizer.
The surveys revealed that seventeen students felt that their second essays were more organized and were written better than the first. These students stated that they felt their second essays were better because they were easier to understand. They reflected it was because they used paragraphs more effectively, their ideas did not bounce back and forth, and they added more details than in the first essay. Four students felt that the first essay was better because both stories used were non-fiction and they felt it was easier to compare and find details. One of the four students shared that the stories for the first essay were easier to read and understand.

Students’ Thoughts about the Venn Diagram

In the same survey, students also revealed their thoughts about using the Venn diagram. Seventeen students, or eighty-one percent of the class thought that the Venn diagram was beneficial to their writing (see Figure 5). They stated that it helped organize their thoughts and helped them add details to their writing.

Thirteen of these seventeen students liked their second essays better and felt that the Venn diagram was the reason why. They saw the graphic organizer as a tool that helped them organize their ideas before writing. They were able to add more details, and were sure they added details from both stories. The other four students that preferred the second essay stated they felt the Venn diagram had no effect on the quality of their essay and that it did not help organize their essays.
Two of the four student stated that graphic organizers took too much time to create and fill in, one said that it was easier to look back to the original story, and the last student stated that he or she knew the similarities and differences in his or her head and did not need a graphic organizer for prewriting.

The final four students stated that the first essay was the better of the two. Ironically, these four students revealed that even though they liked the first essay better, they felt the Venn diagram did improve organization in their second essays. They stated that "it was easy" to put the "sections" of the Venn diagram into paragraphs and it was easier to include details from both stories.

Figure 5: Students' Attitudes Towards the Graphic Organizer

<table>
<thead>
<tr>
<th>Benefit from Graphic Organizer</th>
<th>No Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>19%</td>
<td>81%</td>
</tr>
</tbody>
</table>

The New York State ELA test was given in February of 2003. The third day of testing consisted of two different reading pieces, two short responses, and an extended response that used both the readings. The researcher encouraged the
students to use a graphic organizer on the planning page because of the results of the students’ surveys that reflected eighty-one percent of the students felt the organizer improved their writing. After the ELA test, the data were compiled as to how many students used a graphic organizer on the planning page and all students were interviewed to find out if they used an organizer, which one they used, why they chose it, and if they felt it helped them during the test.

The data represented in Figure 6 revealed that eleven students, or fifty-two percent of the class used a graphic organizer effectively, four drew a graphic organizer that contained no information, two students wrote notes, and four students did not use any organizer at all. This also revealed that seventy-one percent of the class attempted to use a graphic organizer on the ELA test. This percentage is close to the eighty-one percent, which is the amount of students on the survey that felt the Venn diagram helped improve their writing. This showed that nine percent that thought the diagram was helpful chose not to use it independently on the ELA test. It also revealed that twenty-nine percent of the class chose not to use a graphic organizer at all. The interviews that followed helped shed some light on why students chose not to use organizers even when they felt the organizers were important to the quality of their writing.
Student Interviews

Students were interviewed individually to find out if and what they used on the planning page, asked why they used it, and to find out what their thoughts were about graphic organizers during the test.

Eleven students used a graphic organizer on the planning page with information appropriately placed on it. These students included the fact that the organizers they chose were ones that were familiar to them, easier to create on their own, and that the organizer “worked” for their ideas and the ideas presented in the stories. The Venn diagram was not used by any of the students because they felt it was not appropriate for the task.

The students were given the opportunity to share why they used an organizer on the planning page. Some of these students gave several answers. Eight students replied that the graphic organizer helped them organize their
thoughts before writing. Six students stated that the graphic organizer helped them remember to use an introduction, body, and a conclusion in their essays. Another common response was that the organizer helped them add details and it assisted them in making sure they added those details from both stories. A few students included the fact that they liked the organizer because it was easier for them to go back to during writing instead of looking through the original piece.

Four students attempted to use a graphic organizer. They drew an organizer but did not fill it in with information. Several students gave more than one reason as to why they did not fill in the organizer. When asked why they did not fill in the organizer with details one replied that the ideas were in his head and he just started writing the essay. Another three students were worried about using too much time to create and fill in the organizer and therefore would not have enough time to complete the essay.

Four other students did not use a graphic organizer. Again, several students gave more than one answer. Three students replied that they did not need the organizer because the ideas were in their heads and they just started writing the essay. One student replied that he did not know which one to use or what to write. Another two students were worried about using too much time up to create and fill in the organizer.

The last two students did use the planning page but did not use a graphic organizer. These students used the page to write notes. Some of the reasons the
two students shared were that they felt the organizer was too small for all their ideas, they were worried about wasting time creating an organizer, and they felt that notes were efficient for their individual needs.
CHAPTER V

Conclusion and Implications

Conclusion

The results of this study supported the hypothesis that using graphic organizers helped improve the writing of fourth grade students. This is seen when examining Figures 4 and 5. Figure 4 demonstrated that more than half the class increased their organization score by at least one point on the four-point rubric. This also demonstrated that there were no decreases in scores while using an organizer. Even though this appeared to be a minimal gain many students who were having difficulties were helped in the area of organization.

Impressive results were seen in Figure 5. It expressed the students’ attitudes towards using a graphic organizer. Eighty-one percent of the class felt that the organizer was beneficial to their writing. Their thoughts were important to me because if the students found graphic organizers helpful, they would be motivated to independently use them in the future. This is evident in the students’ work even after the completion of the study because they are continuing to use some graphic organizer independently.

The combination of this information leads me to believe that graphic organizers are important tools to use during the pre-writing stage. Even though
the gains in all areas were not as high as anticipated, there is enough evidence that has convinced me to continue to use graphic organizers in the classroom.

**Implications for the Classroom**

The results of this study have proven the importance of using graphic organizers in the classroom. This implies that students’ writings will benefit from the use of graphic organizers. One area that stood out was the fact that the majority of students saw their essays improve with the use of an organizer. This awareness has helped the students become more analytical of their work, something I felt the students did not have before this study. Making students responsible for the quality of their work appears to be an area that has been roused from this study.

Graphic organizers have been used in other aspects of the school day such as with narrative texts. Research has proven that organizers helped students with not only pre-writing but also in reading comprehension and with vocabulary. Due to the increase in writing scores, I will introduce graphic organizers to help students with understanding expository text and vocabulary.

**Implications for Future Research**

Future research should be done in this area because this study was not long enough to see if the essay scores would continue to increase. It would also
be interesting to find out if the same or other grade levels would have similar results as found in this study.

Some cautions to note are to make sure that both sets of stories used for the essays are the same genre and level. This might have caused some variation in the results. Another caution is to make sure that researchers effectively modeled how to use the graphic organizer. Students also need to have plenty of opportunities to use graphic organizers prior to using them independently.

The students’ level of independence is an important factor. The researcher needs to know if the students have mastered the use of an organizer before introducing other types. This would be an area to focus on to see if the students could use organizers independently. When students were confronted with the ELA test, I felt that some of the students were uncertain as to which organizer would help them the most with the task that was given.

I feel there are still questions that need to be answered. Where the organizers taught effectively? Was using the organizer repeated enough so that the students can use the organizer independently? When given an independent task, would the students know which organizer they should use when confronted with various types of stories? How many organizers and which ones should be taught? Even though I saw improvement in the students’ writing and they felt that the organizers helped them, there are still many areas that can be studied in the topic of graphic organizers.
References


APPENDICES
Appendix A

Student Survey

After sharing the essays in your group, please fill in this survey based on your opinions.

1. Which essay do you feel is more organized? Why?

2. Which essay is easier for you to read and understand? Why?

3. Do you feel that the Venn Diagram helped you write better? Why do you feel this way?

4. What do you think you could do to improve your essays?
Appendix B

Student Interview Questions

1. Did you use the planning page on the ELA test?
2. Why did or didn’t you use the planning page?
3. What did you create on the planning page? Why did you choose this?
4. On the student survey, did you find that the Venn Diagram helped or didn’t help improve you writing?
5. If you thought it helped, why didn’t you choose to draw a graphic organizer on your planning page?
6. Do you think the graphic organizer that you created help you on the ELA test? Why or why not?
7. Will you continue to or start using graphic organizers on your own? Why or why not?
8. When will you use them?
9. When do you find them helpful?
## Comparison Essay Rubric

<table>
<thead>
<tr>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Has all requirements</strong> (Introduction, body, and conclusion)</td>
<td><strong>Has most requirements</strong></td>
<td><strong>Has some requirements</strong></td>
<td><strong>Has few requirements</strong></td>
</tr>
<tr>
<td>Essay is developed in an interesting way (reveals both similarities and differences effectively)</td>
<td>Essay is mostly developed (reveals both similarities or differences)</td>
<td>Essay is partially developed (limited similarities and or differences)</td>
<td>Essay lacks development (lacks similarities and or differences)</td>
</tr>
<tr>
<td>Logical plan of organization</td>
<td>Has a plan of organization</td>
<td>Weakness in organization</td>
<td>Lacks organization</td>
</tr>
<tr>
<td>Excellent details</td>
<td>Some details</td>
<td>Limited details</td>
<td>Lacks details</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistently uses correct capitalization and punctuation</td>
<td>Usually uses correct capitalization and punctuation</td>
<td>Sometimes uses correct capitalization and punctuation</td>
<td>Rarely uses correct capitalization and punctuation</td>
</tr>
<tr>
<td>Writes in complete sentences</td>
<td>Usually writes in complete sentences</td>
<td>Some incomplete sentences</td>
<td>Incomplete sentences</td>
</tr>
<tr>
<td>Uses a variety of sentences</td>
<td>Usually uses a variety of sentences</td>
<td>Sometimes uses a variety of sentences</td>
<td>Rarely uses a variety of sentences, simple sentences</td>
</tr>
<tr>
<td>Uses vivid descriptive language</td>
<td>Mostly uses vivid descriptive language</td>
<td>Sometimes uses vivid descriptive language</td>
<td>Lacks vivid Descriptive words</td>
</tr>
<tr>
<td>Mature vocabulary</td>
<td>Appropriate vocabulary</td>
<td>Some appropriate vocabulary</td>
<td>Simplistic vocabulary</td>
</tr>
</tbody>
</table>