

Improving Second Language Learners' Reading Comprehension through the Use of Graphic Organizers

**Jennifer M. Cavanaugh
J.E.B. Stuart High School
Fairfax County (VA) Public Schools
Submitted June 1999**

Introduction

I teach three sections of World Studies I at J.E.B. Stuart High School in Falls Church, Virginia. World Studies I encompasses world history from prehistoric times to 1000 A.D. I use Prentice Hall's *World History: Connections to Today* to teach a variety of topics including the river valley civilizations (Sumer, Egypt, Indus Valley, and Shang China), India and China, the Americas, Greece, Rome, the Middle Ages, the Byzantine Empire, and the Islamic World. The Virginia Standards of Learning ultimately determine what topics I cover in each chapter. Prior to the beginning of the grant project in January, I had used graphic organizers with my students. However, I tended to utilize the textbook's guided reading activities more. My research project began with the study of Rome in late February and early March and continued through the study of early American Civilizations in April.

Methodology

The purpose of my research project was to explore methods for improving the reading comprehension levels of second language learners. When contemplating a technique to improve reading comprehension, I thought about my own learning style and the techniques I use to grasp information presented in articles and books. I understand concepts and ideas better when information is categorized and organized; therefore, I centered my lesson plans on various types of graphic organizers. I used sequence chains, t-lists, description guides, and comparison-contrast charts. Throughout this paper, I provided examples of the graphic organizers that I used with my World Studies I students. To assess how graphic organizers affected the reading comprehension levels of my students, I had them complete daily quizzes while using their graphic organizers. I believed that the utilization of graphic organizers would immediately improve the reading comprehension levels of my students.

Student Information

My project focused on two students. Student A is a 15-year-old freshman who was born in the United States. She spoke Spanish, Portuguese, and English. She was not enrolled in the ESL (English as a Second Language) program at present, but had been enrolled in ESL during her elementary school years. Student B is a 16-year-old sophomore who was born in Sierra Leone and moved to the United States in 1997. She spoke Krio and English. At the time, she was registered as a B2 student in the ESL program at J.E.B. Stuart High

School (and was close to exiting the program). As a result, Student B was enrolled in regular education classes including Algebra I and World Studies I.

Research

In *Content Area Reading*, Richard and JoAnne Vacca contend that the use of graphic organizers improves student comprehension. According to the Vaccas, graphic organizers or representations provide students with a "study strategy that allows them to identify what parts of the text are important, how the ideas and concepts in the text are related, and where they can find specific information to support more important ideas."¹ The Vaccas present a variety of graphic organizers in their chapter on text organization including series-of-events chains, comparison-contrast matrixes, and semantic maps.

The Vaccas maintain that the structure and layout of graphic organizers should match the structure and layout of the textbook from which the students will retrieve the information they need for completing a comparison-contrast chart or sequence chain. For example, Prentice Hall's *World History: Connections to Today* includes information on the river valley civilizations such as Egypt and Sumer. As a result, students could complete a chart asking them to compare and contrast Egypt and Sumer by examining each civilization's government, geography, economy, social structure, and religious beliefs. The data and the conclusions presented in this paper strongly mirror the information discussed in the Vacca's chapter on text organization.²

Data

I began my project with the study of Rome. My unit on Rome focused on a variety of topics including the early Roman republic, geographical features of Italy, the expansion of Italy, the rise of Julius Caesar, the Pax Romana, Christianity, and the fall of Rome. Ultimately, the content and how it was presented in the textbook determined what type of graphic organizer I used to introduce the material to my students. I began by using a comparison-contrast chart that examined the roles and responsibilities of patricians, consuls, dictators, and plebeians. In addition, I required my students to respond to two content specific questions (Illustration A).

Illustration A The Roman World Takes Shape Republic Chart

Government Position	Description	Role/Responsibilities
Patricians		

¹ JoAnne and Richard Vacca, "Text Organization," chap. in *Content Area Reading* (New York: Harper Collins College Publishers, 1996), 258-259.

² JoAnne and Richard Vacca, "Text Organization," chap. in *Content Area Reading* (New York: Harper Collins College Publisher, 1996), 258-267.

Consuls		
Dictator		
Plebeian		

1. What is a republic? How did the Romans view a republic?
2. Why were plebeians discontented during the early republic? What reforms did they win?

Next, I used a t-list when reviewing the expansion of Rome and Rome's wars with Hannibal. When I assigned a t-list, I provided my students with the main ideas and told them the number of facts that they must find to support each main idea. Third, I used a description guide while reviewing Rome's many achievements, especially in the areas of art, architecture, engineering, literature, history, and law. Finally, I used a sequence chain activity when examining the Germanic invasions of Rome.

Prior to the administering of open-note quizzes, I reviewed every activity with my students. I provided an audio and visual review of all materials. I used the overhead projector and the chalkboard to assist my visual learners and retrieved information from students in a discussion style format to assist my audio learners. At the beginning of March, I analyzed the quiz scores for students A and B and discovered that their quiz scores had improved; however, I realized that their overall comprehension of key concepts had not improved. Neither student could recall or discuss major ideas and concepts about civilizations that we had studied in class.

Through observation, I discovered that I needed to alter my research question in order to improve the reading comprehension levels of my students. While reviewing The Long Decline, I noticed that Student A was recopying all of the notes listed on my transparency when she had already listed the same notes on her decline of Rome chart. As a result, she was unable to benefit from the class discussion about the fall of Rome. I asked her why she copied my notes

when she had her own notes. She responded by saying that if she did not copy my notes, she would not be able to remember what was important and what was not important when reviewing her notes. Basically, she did not have a great deal of confidence in her ability to decipher the important facts in the textbook while completing t-lists, charts, and sequence chains.

In the beginning, I believed that the utilization of graphic organizers when presenting and reviewing historical content would automatically improve the reading comprehension levels of my students. By this point, I realized that the utilization of graphic organizers was just the first step in enabling my students to improve their reading comprehension levels. In addition, I found that I must teach my students how to use their graphic organizers when taking open-note quizzes, participating in class discussions, or reviewing for tests. I continued using graphic organizers when presenting historical content; however, I altered my method for reviewing graphic organizers with my class.

I decided to revamp my research question when I began my unit on the Americas (Incas, Aztecs, Olmecs, and Mayans). I still required my students to complete graphic organizers; however, my method for reviewing graphic organizers with them changed.

I began the Americas unit with a comparison-contrast chart that examined the location, time period, religious beliefs, social structure, advances and achievements, and the government of the Mayans, Olmecs, and Aztecs. In addition to the chart, the students responded to 5 content specific questions and defined five terms. The students completed the chart for homework. I created an answer key for the chart activity and placed it on the overhead. As I reviewed the chart with my students, I required students to highlight any facts that we both had in common and to write down and highlight any facts that they did not have listed on their charts. This review activity took approximately 40 minutes to complete because the students lacked familiarity with this review method.

During the review, the students were engaged more in the discussion activity because they could not copy my notes until after they had highlighted everything that we had in common. In the process, they read their notes and my notes *thoroughly*. I assessed this method by administering an open-note quiz. Student A received a perfect score. Unfortunately, student B did not take this quiz because she was absent.

After experiencing success with this method with the class as a whole, I divided my class into six groups of three. Each group was responsible for creating a museum exhibit on the Incas, which included information on government, communication, farming methods, chosen women, geography, and religion. The students were responsible for taking notes on any two topics and developing a visual representation of their topics. Each group had to transfer its ideas and visuals on to a piece of poster board. In addition, I provided each student with a chart that was divided into the same categories (Illustration F).

Illustration F
The World of the Incas
Museum Exhibit on the Incas

Task: To create a catalog for a museum exhibit on the Incas

How:

1. Each exhibit should have galleries for geography, government, communication, farming methods, religion, and the Chosen Women.
2. Each catalog should include a written guide.
3. Catalogs might also include maps, sketches, or photocopies of artifacts, diagrams of urban plans, and the like.

The World of the Incas

Geography	Government	Farming Methods
Religion	Chosen Women	Communication

After the groups had completed their posters, I required the students to teach their two topics to their group members. As they listened to their group members, students completed their charts on the Inca Empire. In addition, students transferred their individual notes on to the Inca Empire chart. Upon their completing of this project, I felt confident about my students' understanding of early American civilizations.

I ended the unit on the Americas with a review activity, which consisted of a chart and a few content specific questions (Illustration G).

Illustration G
The American Civilizations
Review Sheet

Mayas	Aztecs	Incas	Olmecs	Mississippians

1. Why did the Incas construct such an elaborate road system?
2. Describe the duties of Chosen Women.
3. Identify the location of the land bridge that connected Alaska with Siberia.
4. Why did Mayans develop an accurate solar calendar?
5. What happened as a result of a drop in sea level during the last ice age?
6. Prior to migrating to North America, where did the early peoples of the Americas live?

I divided the class into six groups of three and provided each group with approximately eight slips of paper containing words or phrases which described one of the five American civilizations listed on their charts. The students used their American Civilization graphic organizers while completing the review sheets. In the end, each group presented its words or phrases to the class and informed the class as to where to place them on the chart.

During the activity, I overheard a group of students arguing about where to place a particular phrase on their chart. Within minutes, one of the group members remarked that the phrase was associated with the Mayans. The group members questioned the accuracy of his knowledge. At this point, the student showed them his chart and informed them that the phrase was not only listed on his chart but it was also highlighted. At that moment, I realized that my method was a success. Before ending the unit, I assessed my students one last time by administering a twenty-five question objective test (Illustration H). In the end, the class average for the test on American Civilizations was a seventy-nine percent. Student A scored eighty-four percent while student B received a perfect score. Prior to this point, the class average for the majority of my tests ranged from sixty-four percent to seventy-two percent.

Conclusion

I concluded the study by providing each student with a packet containing copies of the graphic organizers featured in this paper and asking each to write down his or her thoughts and opinions about the various graphic organizers used in class. Overall, students preferred graphic organizers that were more structured like The Roman World Takes Shape and the Civilizations of Middle America charts because they knew exactly what to write in each box. According to one student, illustration A "was quick and not difficult and helped me learn the information." Another student commented that illustration E was "beyond terrific because you know what to look for." Finally, a third student remarked that illustration E "makes a good study guide and tells me exactly what you need us to know."

In addition, students commented about the use of highlighters in class. One student remarked that, "the highlighting we did helped me a whole lot because it helped me pick out all the important info for quizzes and tests." According to student A, "highlighting helps you know what to learn."

The majority of the students found t-lists and graphic organizers (such as illustration C) to be too open-ended. One student remarked that, "you could write everything out of the textbook here, but only a tiny bit would be highlighted and used." Another student commented that t-lists were "quick and easy but not very helpful until we highlighted the needed information for the test."

Finally, some students found sequence chains helpful while others found them confusing. According to one student, sequence chains are "a good way to show a timeline of events." On the other hand, student B remarked that the sequence chain is "a little too hard."

Ultimately, I concluded that graphic organizers, which were more specific and structured, aided the learning of my students. In addition, the use of highlighters while reviewing graphic organizers enabled my students to know the difference between relevant information and irrelevant facts. Students who completed their class work and homework and participated during class discussions benefited from the use of graphic organizers and highlighters.

References

Vacca, J. & Vacca, R. (1996) *Content Area Reading*. New York: Harper Collins College Publishers.