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The Use of Graphic Organizers in Improving the Comprehension of Grade Six Pupils

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**The Use of Graphic Organizers in Improving
the Comprehension of Grade Six Pupils**

**A Seminar Paper
Submitted in Partial Fulfillment
of the Requirements for the Degree
Master of Arts in Teaching
with Specialization in Reading**

**College of Graduate Studies
and Teacher Education Research
Philippine Normal University
Manila**

by

**MARLYN B. GERIO
March 2012**

ABSTRACT

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Title: The Use of Graphic Organizers in
Improving the Comprehension of Grade
Six Pupils
Degree: Master of Arts in Teaching
Specialization: Reading
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Key Concepts:

Graphic Organizers
Retelling
Comprehension

Statement of the Problem:

This study used graphic organizers to improve the comprehension of the heterogeneous grade six class of Cataning Elementary School. The pupils' comprehension level was low as reflected on their PHIL-IRI results. To address this concern, the study utilized graphic organizers in teaching to find out their effectiveness in improving the learners' comprehension and retention.

Methodology:

This study employed the descriptive method to determine how graphic organizers help in increasing the comprehension level of the thirty heterogeneous grade six pupils of Cataning Elementary School.

They were given pre-test which contained the basic reading skills such as noting details, sequencing events, getting the main ideas, and constructing meaning from a selection. Then reinforcement lessons that used graphic organizers were conducted beginning 3rd week of January and ending on the last week of February.

The reinforcement reading sessions were conducted for 40 minutes. Pupils were given seven informational texts and eight narrative texts. The graphic organizers were given during the while-reading phase. Discussions about the reading selection followed where volunteer pupils had to retell the assigned text for the day.

The researcher used the Narrative Retelling Rubric (Read, Write and Think, IRA, 2000) which indicated the reader's comprehension of textual information, metacognitive awareness, strategy use, involvement with text, facility with language and language development.

Readers' questionnaires and checklist were also used to further identify the effectiveness of the graphic organizers in their reading sessions.

A parallel post-test was also given after the sessions were conducted to measure gains in comprehension..

Summary of Findings

The major findings of the study were as follows:

1. The grade six pupils who were the respondents of the study had a mean percentage score which was lower than expected of their grade level when tested on reading skills such as noting details, sequencing events, getting main ideas, and constructing meaning from texts.

2. The graphic organizers used by the teacher as a scaffold increased the pupils' ability to comprehend as revealed by their retelling of selections read and their scores in comprehension test after each reading session.
3. The pupils had a positive perception about graphic organizers as an aid in retaining information, raising their interest, experiencing engaged reading interaction, improving reading skills, and comprehending texts better.
4. The post-test score of the pupils was at par or even higher than expected by their grade level after the conduct of reading sessions using graphic organizers. Even the retellings showed recall of important ideas and details cued by the authors.

Conclusions

Based on the results of this study, the following conclusions were formulated:

1. Graphic organizers helped improve the comprehension of the pupils in general.
2. There was great improvement in terms of engagement, retention and comprehension among poor readers in particular, and this could be attributed to the use of graphic organizers.
3. Graphic organizers facilitated the pupils' comprehension better as teachers combine them with verbal instructions.

4. The graphic organizers helped develop confidence among pupils because these aided them in retaining relevant information from the selection.
5. Graphic organizers work for both narrative and informational text comprehension.
6. The pupils' had better facility and more confidence in using the graphic organizer when reading narrative texts than informational texts.

Recommendations

In the light of the findings, analysis of data and conclusions drawn, the following are recommended:

1. Use graphic organizers in all levels to scaffold the reading difficulties of the poor readers as well as to enhance the comprehension of fast readers.
2. Facilitate better understanding of the reading tasks both in informational and narrative texts by providing learners with appropriate organizers.
3. Study the content of materials to read so that appropriate and relevant graphic organizers can be designed and prepared by teachers.
4. Prompt how readers should go about in comprehending texts by explaining graphic organizers not only as a teaching strategy but also as learning strategy.
5. Conduct similar study in Filipino and other mother tongues to further investigate the use of graphic organizers both in informational and narrative texts.

APPROVAL SHEET

This seminar paper entitled “**THE USE OF GRAPHIC ORGANIZERS IN IMPROVING THE COMPREHENSION OF GRADE SIX PUPILS**” prepared and submitted by **Marlyn B.Gerio**, in partial fulfillment of the requirements for the Degree of Master of Arts in Teaching Reading is hereby accepted.

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CHAPTER 1

The Problem and Its Setting

Introduction

Comprehension has been the problem of classroom teachers in all subject areas since time immemorial. Yet teachers who want to bring out the best in each pupil never stop from finding solutions to this problem. The influx of technology has been one of the numerous reasons why children are really apathetic in reading. Most of them prefer spending time in playing computer games rather than trying to understand what they are reading. It is because they do not understand what they are reading. They cannot figure out the facts presented by the text.

This problem is very evident on children who are already in the intermediate level when they are supposed to be independent readers. Instead, they lag behind and teachers cannot do anything but to design intervention or remedial programs which may help their pupils.

What if the problem lies in the motivation of learners who lack the inner drive to interact and deepen understanding of the written texts? Hence, teachers must use varied effective teaching strategies in assistance of readers who can hardly cope with their reading problems. The pupils must be trained to use a

repertoire of effective reading comprehension strategies to help them get into their way.

Hansen and Pearson (1983) suggested that comprehension instruction is best when it focuses on a few well-taught, well-learned strategies. They did not encourage teachers on using an array of strategies which might confuse learners and might compound the readers' difficulty in focusing attention to meaning. Instead, they recommended the use of just a few well - chosen appropriate strategies so pupils can focus on their comprehension.

This is precisely the idea why the researcher tried to find better ways to increase readers' comprehension or the grasping of ideas in any given reading material. One of the solutions could be the use of graphic organizers.

Earlier studies revealed that graphic organizers help students to structure their learning, visualize the way information is presented in texts, map out stories to improve comprehension, and see the relationships among vocabulary and concepts (Smith, 2007). Hence, the study on the use of graphic organizers to improve comprehension of learners was undertaken.

Conceptual Framework

This study is anchored on comprehension, difficulties in reading and understanding written texts, and concepts and theories on graphic organizers and their various kinds, and their advantages.

Comprehension has always been considered as an important factor in academic success. Kamil et.al. (2003) define it as the process of making sense of words, sentences, and connected text. It requires readers to make use of background knowledge, experiences, knowledge of the world and words integrated to the presuppositions of the texts so that the interactive construction of meaning is made possible.

However, many learners struggle with comprehension because of several reasons. Barr et. al. (1990) list down general factors such as print skill, vocabulary knowledge, and comprehension strategies that are not fully developed among readers. Additionally, readers hardly comprehend because they are not familiar with the concepts and the text structure of what they are reading.

Teachers play a significant role in helping the students learn from the text. As facilitators and mediators of learning (Lapp et.al., 2007), they can help learners attack what they read by using graphic organizers, defined as visual representation or mapping of the writers' content and textual organization for comprehension and retention (Harris and Hodges, 1995).

Graphic organizers help students in all ages to focus on the task and use information already in their knowledge base, integrating it with new concepts (McKeena and Stahl, 2009). Research shows graphic organizers are especially helpful to special needs of students, since information can be broken down into

manageable sections for them to work on. The use of diagrams to show great amounts of information makes understanding easier.

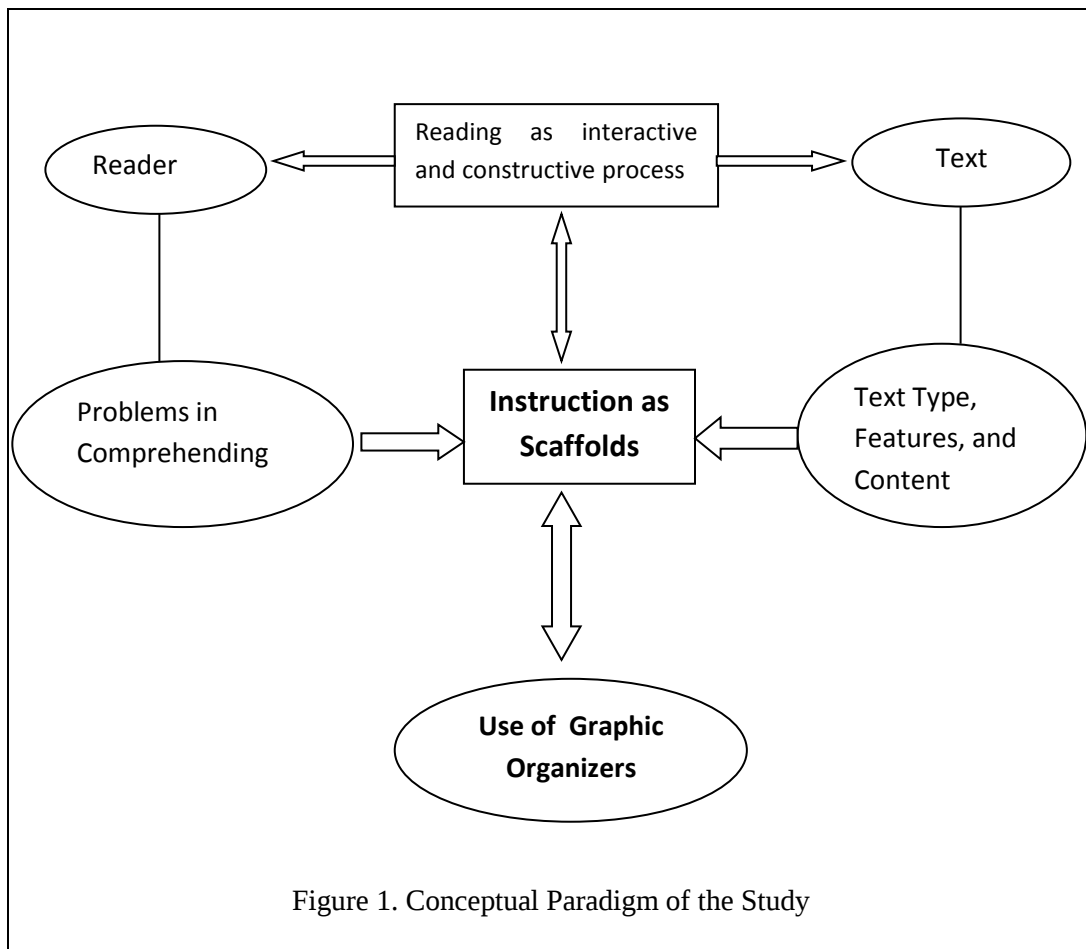
Further, research shows that visual aids such as graphic organizers can clarify information and increase understanding among students (Walker, 2000). Combined with verbal instructions, graphic organizers can be a powerful tool to help increase pupils' understanding and retention of information.

Commonly used graphic organizers are timeline, Venn Diagram, flowchart, matrix, concept map, semantic web, graphs, charts, and many other visuals depending on the text types and contents. Good readers are efficient and effective at visualizing textual contents and translating these into visual forms such that they can illustrate the connection of ideas graphically. On the other hand, poor readers find it difficult to visualize the content of what they read as a consequence of non-comprehension. It is therefore deemed beneficial to guide less able readers' comprehension through the use of graphic organizers until they reach a point when they can come up with their own way of presenting ideas visually or graphically as a result of improved comprehension of text at hand. (Please see Appendix A for examples of graphic organizers appropriate for given text types).

Teachers need to have adequate time to study the reading materials and to choose graphic organizers that match them to facilitate understanding of the texts.

Likewise, teachers must analyze the authors' local as well as global connections in the text as such analysis determines the kind of organizer and the content of the same to be able to guide the processing and understanding of printed materials.

The diagram given illustrates the conceptual framework of the study.



As shown in the diagram, reading is an interactive and constructive process of comprehension. Both the reader and the writer communicate ideas to be able to have meaningful interaction for the construction of meaning (Gunning,

2003). However, readers face difficulties when reading- and so they often fail to comprehend the writers' ideas. Among the many problems readers face, one source is the text itself, particularly the features, vocabulary words and concepts, and text organization. The teachers, therefore, as facilitators of learning during reading instruction, find ways to help readers learn from the texts. One thing they do is to scaffold, a support mechanism used to assist students (Tompkins, 2001) in the social interaction taking place in the classroom. Graphic organizer is one way to scaffold so as to bridge between the problems encountered by the readers as they construct meaning and the intents of the text, its content, features, and type.

Statement of the Problem

General:

The study aimed to improve the comprehension of the heterogeneous grade six class by using graphic organizers as scaffold to support learning from texts.

Specifically the study aimed to:

1. determine grade six readers comprehension level;
2. use graphic organizers in reading instruction for improved comprehension;
3. find out the effect of graphic organizers on comprehension of grade six pupils

Significance of the Study

The following people may gain insights and learn from the results of this study:

Pupils. The direct beneficiary of the study is the learners who struggle in constructing meaning from reading various texts since instruction provides scaffolding through the use of graphic organizers.

Language and Content Area Teachers. They can find useful aids in facilitating learning as they employ graphic organizers for engaged reading. They can also benefit from the mental exercise demanded in preparing appropriate and relevant graphic organizers based on textual demands and content.

School Administrators. They may get ideas on how reading instruction should be conducted, and this can make them include scaffolding through graphic organizers as a criterion during lesson observations.

Instructional Materials Writers/Developers. They may consider not only the print component of instructional materials, but also the visual components which support the print and engage the readers in constructing meaning.

Curriculum Planners. They may propose to include the preparation of graphic organizers as part of the teachers' repertoire of pedagogical knowledge to aid pupils' interaction, comprehension, and retention of ideas from different texts.

Scope and Delimitation

This descriptive study was basically concerned with improving the comprehension of grade six pupils through the use of graphic organizers. The results of the given pre-test for comprehension served as the basis for determining the pupils' comprehension prior to the use of graphic organizers.

Instruction using graphic organizers lasted for almost a month, after which the subjects were asked to answer comprehension test after the discussion of their responses in the given graphic organizers. They were also made to retell the passage read, and their retelling was rated using the Schema Scoring for Retelling by Mitchell & Irwin, 1990.

Each session was allotted 40 minutes for the entire reading reinforcement program including the monitoring of progress in their comprehension.

The selected reading materials were both fiction and non-fiction whose readability was within the respondents' level, and taken from books intended for their grade level.

Definition of Terms

The following terms were defined according to the way they were meant in this study:

Graphic Organizer. It is a pictorial way of constructing knowledge and organizing information to help the student convert and compress a lot of seemingly disjointed information, into a structured, simple-to-read, graphic display. The resulting visual display conveys complex information in a simple-to-understand manner.

Scaffold. It is the assistance or support mechanism provided by the teacher to help learners get meaning from the text in an organized manner.

Text Pattern. It refers to the manner by which authors organize ideas to express their thoughts in written form.

Chapter II

Review of Conceptual and Research Literature

For the purposes of this study, this part presents the conceptual underpinning and empirical results of the studies conducted in the past which have some bearing on the on-going study.

Conceptual Literature

Reading is a process of communication between the author and the reader via the text. Aguirre (2005) further explains it as a complex skill requiring the coordination of a number of interrelated sources of information, one of which is the printed material, also called the text.

Text or printed material is one factor that affects comprehension. The concepts, vocabulary load, readability, pattern, purpose, format, and content of the text need to be considered when matching it with the reader factors (Cook, 1986).

Children normally get paper and pencil test to measure how well they comprehend written texts. Although this is the conventional way of determining how much has been learned from reading, qualitative means are currently available for teachers to provide online processing of texts. One qualitative measure of comprehension is oral retelling described by McKeena and Stahl (2009) as “being naturalistic, avoiding the pitfalls of questioning, and gauging how well the child has internalized the content of a selection.” Retelling is an

assessment tool done by making each reader talk about what has been read. This tool allows for observation of the child's thought processes, what the child values as important, and cultural influences in interpretation (McKeena and Stahl, 2009). Likewise, retelling is valued not only as an assessment tool but also as an instructional tool for improving comprehension, especially when such is coupled with a deliberate scaffold through graphic organizers.

Many students fail to construct meaning because of text and reader factor interaction or the lack of it. Hence, to help readers in the process of constructing meaning and to facilitate engaged reading, teachers attempt to scaffold by creating ways and finding means to achieve the goal of reading. One advantageous medium of scaffolding is the use of graphic organizers.

Graphic organizers are a visual communication tool that shows the relationship between facts or ideas (Tompkins, 2001). They are useful in all phases of learning from brainstorming ideas to presenting information to others. Because they give a picture of information, graphic organizers help teachers to teach and students to learn.

Not everyone learns the same way, but research shows visual aids such as graphic organizers can clarify information and increase understanding for students and others. Combined with verbal instruction, graphic organizers can be a powerful tool to help increase student understanding and retention of information.

Graphic organizers are usually considered pre-reading teaching strategies. As such, teachers analyze the material to be learned, determine major concepts involved in the learning task, arrange the concepts hierarchically, construct a graphic organizer, present the organizer to the students, and clarify definitions and relations through discussion (Barron, 1969). Initially, website in graphic organizers incorporated this approach and investigated their effectiveness on learning tasks at both elementary and secondary levels.

Investigating graphic organizers as pre-reading activities under the auspice of schema theory is reasonable since the objective of organizers in this position is to activate prior knowledge of concepts that may be related to the learning task. However, as research indicates, pre-reading graphic organizers do not function as intended with a high degree of success. As stated earlier, the problem may be that teacher/researcher-constructed organizers are designed to match the schema of the teacher/researcher and not that of the student. Research in this area does not appear to be promising since constructing graphic organizers that match the schemata of the students, rather than the teacher/researcher, may not be possible. The student would have to have knowledge and experiences equal to the teacher/researcher for parallels to be drawn between their individual schemata.

Research that questions the effectiveness of graphic organizers and is based on text structure seems logical, also. This research, which examines graphic organizers as rereading and supplementary reading activities, has been more

successful in finding positive effects for organizers improving comprehension. One aspect of this research that needs clarification or further study is the testing of students' prior knowledge of text structure and/or training in the use of text structure.

Text structure offers a more satisfactory explanation of how graphic organizers work and when, but a fine line in the research approach threatens to be crossed with this as a foundation for organizer research. When presented as supplementary or post reading activities, organizers cease functioning as teaching strategies and commence operating as learning strategies. Although text structure plays a vital role in facilitating graphic organizer construction, the organizer itself facilitates the learning and retention of information from the text. If learning and retaining information is the purpose of graphic organizer instruction, then organizers are actually serving as cues for encoding. In this event, graphic organizer research should proceed under the auspice of the encoding specificity principle (Tulving & Thomson, 1973). According to the encoding specificity principle, when learning occurs, targeted information, as well as information relating to the context and the situation of that specific learning experience, is stored in memory. Furthermore, when information connected to the context or the situation is introduced later, the targeted information is retrieved quickly and accurately from memory. In other words, cues that were present in the text and/or learning situation during the encoding process can function as cues for retrieval of

information later. For example, if children encode the sequence of letters in the alphabet by singing a song, the song can be used later to aid children in remembering the proper letter in the proper sequence. However, Tulving and Thomson(1973) claim that the associations between the cue and the target information must be "forward" associations rather than "backward" associations. That is, the cue used for encoding must be used to retrieve the target information; target information cannot successfully retrieve cues. An example of a backward association would be to ask children to say the letters of the alphabet in order to remember the song. Finally, the encoding specificity principle states that the ability to remember depends on what the information is and how it is stored. Incorporating the ideas within the encoding specificity principle, Readence and Moore (1979) recommend several instructional strategies for content area teachers that facilitate the comprehension of material. They suggest introducing strategies prior to reading in an effort to activate schema and assist encoding. Strategies should be introduced again after reading to function as cues for retrieval. The article presents heuristic techniques for comprehension improvement but research studies have not been conducted to test their effectiveness under the encoding specificity principle. Future research with graphic organizers in content area reading using the encoding specificity merits consideration. This line of research would require the investigation of graphic organizers as supplementary or post reading activities that are student-directed learning strategies. The main

consideration when designing studies to investigate the encoding specificity principle is that to this point the principle has only been tested using word lists and not connected prose. Different results may be found when using text passages. Other factors that need to be addressed before such studies could begin are (a) how organizers could be used to cue retrieval during testing, (b) how to train students in graphic organizer construction within a reasonable time period, and (c) how to evaluate the quality of student-constructed organizers. These are important considerations since graphic organizers that are poorly constructed would affect the type of information that is encoded. Also, if training is long and involved, content area teachers will be inclined to rely on traditional strategies for teaching the content of their courses. Once solutions to these problems are found, the encoding specificity principle can be tested in regard to reading comprehension.

Graphic organizers provide templates or frames for students or teachers to identify pertinent facts, to organize information, and to record relationships between facts and ideas within a learning task. Literature supports the use of organizers to facilitate and improve learning outcomes for a wide range of learners. Mentoring Minds offer graphic organizers in a variety of areas: Language Arts, Math, Reading, Science, Social Studies, and Vocabulary. Each independent set for the subject area includes 25 copies of 20 different organizers. Lovitt (1994) attests to the use of graphic organizers to organize and highlight

essential content information and/or vocabulary. Fountas and Pinnell (2001) cite that when content is illustrated with diagrams, the information can be maintained by students over a period of time.

Organizers portray knowledge in a meaningful way which helps bring clarity to ideas as connections are made. Having a way to organize ideas, facts, and concepts graphically facilitates effective student learning. Many students are visual learners, thus, a visual approach to brainstorming or organizing information is essential. Graphic organizers appear to be a valued approach to utilize in teaching and learning. Students are required to think in multiple directions when using graphic organizers which makes learning an active and meaningful process. Organizers help students generate mental images to go along with information and create graphic representations for information. Graphic organizers are called a variety of names, including knowledge maps, story maps, concept maps, mind maps, cognitive organizers, advance organizers, or concept diagrams.

Over the past several years, the No Child Left Behind Act (NCLB, 2001) emphasizes the concern for the educational accountability of schools in the achievement of student success. This act leads to increased performance from teachers and administrators related to the learning strategies used in classrooms. Research shows that graphic organizers are an example of a proven strategy. Organizers offer an entry point into complex material for visual learners, increase comprehension and retention, and can be used with all students, ranging from

gifted and talented to those with mild cognitive disabilities. Research supports the utilization of graphic organizers as a contributing factor in improving performance in classroom and achievement test scores if they are used effectively and become a fundamental part of classroom instruction. The focus centers on the relationship of information as opposed to memorization of isolated facts. Ausubel (1963) believed that the manner in which knowledge is represented can influence learning. The appropriate organizer can help students form relationships between previously acquired knowledge and new concepts. Learning takes place when the cognitive structure expands with the new knowledge. Ellis (2001) noted that information is more easily learned and understood with visual organizers. Once students acquire the basic, yet solid foundation of a concept, then future content can be addressed at higher cognitive levels leading students to become more strategic learners.

Research shows that graphic organizers are key to assisting students to improve academic performance. In creating an organizer, pertinent aspects of a concept or topic are arranged into a pattern using labels. This process is one that research suggests aids comprehension for several reasons. The first reason is that graphic organizers match the mind. As research shows, the mind arranges and stores information in an orderly fashion. New information about a concept is filed into an existing framework of categories called a schema. A schema already contains preexisting knowledge about that concept. Hence, graphic organizers

arrange information in a visual pattern that complements this framework, making information easier to understand and learn.

The second reason is that graphic organizers demonstrate how concepts are linked to prior knowledge to aid in comprehension. This integrative nature of reading is bridged when students visualize concepts and fill in the links through a graphic representation of the mental nodes they perceive.

Third, organizers aid the memory as opposed to recalling key points from an extended text. This seems almost the same as the second, yet more than comprehension, organizers are also useful tool for retention especially of ideas from long passages.

Fourth, organizers help retain information readily when higher thought processes are involved. This allows the mind to be free from the burden of recalling factual, textual information since said information are already contained in the organizer. Consequently, the mental resources are then allocated to higher levels of thinking without putting aside the significant information learned from reading.

Finally, organizers engage the learner with a combination of the spoken word with printed text and diagrams. This means that the development of macro-skills is encouraged by combining the receptive and productive areas of communication. From reading to working on visual organizers, skills are likewise

harmoniously and simultaneously aiding each other for continued and balanced growth in literacy- what they read is what they write and talk about later on.

Learning to think is an essential skill needed in education today. Often educators use teaching methods where students are passive learners. Difficulty arises when students must make meaning out of information taken from a book, video, or a lecture. When students interact with content, it is important that they actively construct meaning. To do this, students must be active thinkers during the learning process. Researchers have shown that graphic organizers can enhance content comprehension (Alvermann and Boothby, 1986; Darch, Carnine, and Kameenui, 1986; Horton, Lovitt, & Bergerud, 1990).

Marzano, Pickering, and Pollock (2001) state that graphic organizers combine the use of both the linguistic and non-linguistic modes of learning. As a result, educators can employ graphic organizers to demonstrate to students the relationships between different content and between new and prior knowledge. Meyen, Vergason, and Whelan (1996) share that graphic organizers depict a visual, organized display that makes “information easier to understand and learn”.

Vocabulary is essential to understanding concepts; thus content vocabulary needs to be addressed. Teachers need to include meaningful vocabulary instruction as it must not be only incidental. The Mentoring Minds’ Product Development team, in an effort to determine effective means of teaching vocabulary, found evidence that graphic organizers help students learn vocabulary

in informational text. All age levels of students benefit from the use of graphic organizers and these visual representations have application in many different content areas (Dye, 2000). Students with learning difficulties need strategies to help them achieve success in academics. Learning disabled students require extra support to guide them to focus on the important information and learn how to organize information (Gagnon & Maccini, 2000).

Students must have information presented in a clear, concise, and organized form if they are to make progress in content area classrooms. Graphic organizers have great potential for students with learning disabilities (Gagnon & Maccini, 2000). Graphic organizers offer support when new information is presented and previously learned information is reviewed (Dye, 2000). Difficult concepts can be simplified and arranged so that the representation of content is organized and meaningful. Using a graphic organizer to link newly learned information to an existing knowledge base is a viable strategy for teachers and students. This linkage process seems to be precisely what students need for learning to result.

This process helps them store and retrieve the knowledge in their long-term memory. Teachers use graphic organizers to reinforce learning, assess learning at multiple checkpoints, and identify misunderstandings of concepts. Teachers constantly revise their teaching strategies to promote effective learning. Graphic organizers can be used before, during, and after instruction. Learning

environment settings for using organizers vary from individual use, to partners, to small groups, to centers, and to whole class environment. Teachers can use organizers to brainstorm ideas, to activate prior knowledge, to develop a story map while reading a book, to remain focused on content material, to present findings from an investigation, to confirm existing knowledge, and to review at the end of the period or week of study. Graphic organizers are valuable in any activity which requires the use of critical thinking. The use of these tools can generate excitement and enthusiasm toward learning.

Therefore, graphic organizers appear to be a beneficial instructional strategy to support students to retain learned information longer and to learn more effectively.

Horton, Lovitt, and Bergerud (1990) report the value of graphic organizers to both middle school and high school students with or without disabilities as an organizational tool to promote the memory of content-related information. Other research by Jitendra (2002) indicates that organizers assist this same group of students in how to represent problem situations, such as searching for solutions to word problems.

Frequently, learning disabled students have difficulties recalling key information, making connections between broad concepts and details, and solving mathematical word problems. According to Maccini and Ruhl (2000), students with learning disabilities might experience fluency difficulties with mathematical

facts and with basic mathematical procedures. It is therefore helpful to practice with these learners the use of graphic organizers deliberately and purposively included in instruction so that these become a learning strategy for them when they have gained automaticity with their use.

Teachers must be made aware that the use of graphic organizers is not only a validated instructional practice but a viable strategy that might lessen the difficulties learning disabled students experience in mathematics (Gagnon and Maccini, 2000). Both teacher-directed and student-directed approaches are considered to be best practices when working with graphic organizers in the classroom (Lovitt, 1994). Teachers select the appropriate approach based upon the purpose of the lessons and individual needs of the students.

The rationale for the development of the entire line of graphic organizers is based upon an analysis of research that centered on supporting students' cognitive processing of content. After reviewing pertinent literature and participating in brainstorming sessions with teachers and administrators, the Product Development Team at Mentoring Minds developed subject area graphic organizers: Math, Language Arts, Reading, Science, Social Studies, and Vocabulary.

Graphic organizers clarify learning and organize information which leads to students being active in acquisition of conceptual knowledge. Teachers also use this resource to develop lessons and link new concepts with existing knowledge

during a lesson leading to meaningful learning. The students' ability to organize and structure content can also be assessed at the conclusion of a lesson. Ultimately, graphic organizers allow for more than just content acquisition. Students learn processing skills, patterns for organizing information, critical thinking skills, and communication skills. Graphic organizers combine the printed word and the spoken word making learning active, which makes it meaningful, and hence leads to the ultimate goal of effective learning for students.

Visual learning strategies improve student performance. Scientifically based research cited in the literature review demonstrates that a research base exists to support the use of graphic organizers for improving student learning and performance across grade levels, with diverse students, and in a broad range of content areas. Firstly, the use of graphic organizers is effective in improving students' reading comprehension. It is also positively influencing student achievement. Students using graphic organizers show achievement benefits across content areas and grade levels. Achievement benefits are also seen with students with learning disabilities. Thirdly, they facilitate thinking and learning skills. The process of developing and using a graphic organizer enhances skills such as developing and organizing ideas, seeing relationships, and categorizing concepts. Fourth, graphic organizers improve retention. Use of graphic organizers aids students in retention and recall of information.

Graphic organizers are anchored on cognitive learning theory. The use of graphic organizers supports implementation of cognitive learning theories such as the dual coding theory, schema theory, and cognitive load theory.

Many students with language-based learning disabilities manifest difficulty processing semantic information. The design of some GO's is language-free whereas others incorporate semantic prompts designed to help students focus on essential understandings about a topic. We need to know more about the relative power that different kinds of semantic prompts play in promoting effective learning for students with language difficulties.

GO's can effectively facilitate learning for most students in writing, reading comprehension, and content-area subjects across a wide range of ages, grades, and learning abilities. Teachers can use GO's in activating bodies of knowledge, during lessons as organizers, or as a method of review.

With the exception of students with profound cognitive disabilities, GO's can be effective with all students when the complexity of the GO figure is developmentally appropriate for intended students' background knowledge and experience with GO's. Organizers also work when the level of scaffolded assistance associated with using the GO matches the students' zone of proximal development. They also work when the complexity and density of the information to be communicated on the GO is appropriate in relation to students' background knowledge of the information or closely related topics, and the size of the space

for which information is to be noted by students on the GO is sufficient, given students' scripting ability so that they can independently read what they noted on the GO at a later time.

While GOs should always be among accommodation options, consistent and effective use as part of the normal instruction can significantly reduce the need for accommodations in the first place. Thus, GO's might better be viewed as a preventive measure than as a responsive (to the disability) measure.

Since graphic organizers are visual devices, a common misperception is that they are unlikely to work with auditory learners and should use only for visual learners. In reality, the complexity of the to-be-learned information, the learner's innate memory capability, the extent and quality of elaboration the learner applies when processing the information, and the existing background knowledge of the learner dictates the subsequent success in learning far more than one's perceptual preferences. Likewise, teachers' knowledge, ability to facilitate student elaboration and ensure engagement of all students, pedagogical skills associated with using graphic organizers in the classroom, and the opportunity to employ them in a quality manner play a highly significant role in the relative impact of GOs on student learning.

GOs work best when instruction is informed, explicit, intentional, and scaffolded. In informed instruction the teacher provides a rationale for using a GO,

explains what the GO is designed to do, and informs students about different ways and the different contexts in which it can be used to increase success.

When instruction is explicit, the teacher overtly tells and shows students how the GO is used. Once students have developed a basic proficiency with a GO, instruction can gradually switch to more implicit forms whereby the teacher creates opportunities for students to adapt or create their own versions of GOs

Intentional instruction informs students that they are expected to develop skill and demonstrate competency using the GO.

Scaffolded GO instruction occurs in two primary ways. Scaffolded assistance is the mediation or coaching students are provided as they learn how to independently use the GO tool. Scaffolded GO complexity is a process whereby a relatively simple version of a GO is introduced to students, and then, as students develop familiarity and skill using it, increasingly more complex versions of the same GO are introduced into lessons and mastered.

Appropriately used, Graphic Organizers instruction can significantly reduce the amount of time required to attain instructional objectives for both typical learners and those with cognitive disabilities. The practicality of using GOs is primarily a function of (a) teachers' knowledge of the subject being taught and knowledge and skills of GO pedagogy and (b) opportunity to employ GO pedagogy in an effective manner.

Summarily, the literature review focuses on learning theories that support the use of graphic organizers, and the benefits of graphic organizers on student achievement in terms of literacy development. In support to this, Inspiration Software, Incorporated further defines literacy development as vocabulary development, early reading comprehension (kindergarten through second grade), reading in other grades, and writing skills. Additionally, the conceptual review includes the use of graphic organizers for thinking and learning skills. Inspiration Software, Incorporated defines thinking and learning skills to include critical thinking, retention, problem solving, and note taking or outlining. Lastly, this part of the study dwells on the use of graphic organizers in other classroom work, particularly curriculum, grade, and student-population-specific uses.

Research Literature

Studies incorporating pre- reading organizers as teaching strategies with secondary students suggested that organizers have no significant effect on comprehension (Berget, 1977; Earle, 1969; Estes et al., experiment # 1, 1969). On the other hand, studies with elementary students suggested that graphic organizers facilitated comprehension and free recall of relevant information when presented prior to reading (Alvermann & Boothby, 1983; Simmons, Griffin, &

Kameenui, 1988). However, the training of subjects was considered a major problem and limitations of each of these studies. The longest period of training offered to elementary students in any of the studies was 14 instructional days at 25 minutes per day (Alvermann & Boothby, 1986). Other training periods for elementary students ranged from nine instructional days (Alvermann & Boothby, 1983) to six 30-minute training sessions (Simmons, Griffin & Kameenui, 1988). Secondary students fared the worst in the area of training with the longest period of instruction lasting only one class period (Alvermann, 1981, 1988). Most secondary level studies incorporated no training in graphic organizers' use or purpose (Berget, 1977; Earle, 1969; Estes et al., 1969). In studies where training was furnished, all but one (Alvermann, 1988) presented instruction in group situations. Another limitation of the studies with elementary school subjects is the length of passages used, approximately 130-200 words. Passages of this length contain few key words or representations of ideational organization; therefore, organizers constructed from these passages may have been limited in the type and/or quantity of information conveyed to students. Finally, sample sizes in the studies prevent the establishment of firm conclusions concerning the effectiveness of graphic organizers and so they also limit the generalizability of the findings.

A study by Simmons, Griffin, & Kameenui (1988) that examined the time of presentation of graphic organizers found that presentation before or after reading had no effect on comprehension and recall of elementary students on

immediate measures. On delayed measures, the group receiving organizers before reading outperformed the group receiving post reading organizers, but neither group outperformed the control group that received traditional instruction. However, the authors of the study neglected to provide a clear explanation of how students in the post reading group used the graphic organizers. Students in this group may have viewed the organizers as superfluous material since the reading task had been completed. Students may have believed that reading alone is sufficient for learning, and therefore, did not attend to or interact with the organizers that were provided following the reading activity.

Furthermore, none of the groups in the study demonstrated acceptable levels of comprehension on outcome measures.

Studies investigating the effectiveness of student-constructed graphic organizers showed that elementary students' free recall ability was facilitated through student-constructed graphic organizers (Berkowitz, 1986), while secondary level students realized an improvement on vocabulary scores (Barron & Stone, 1974) and comprehension measures (Bean et al., 1986).

The study by Berkowitz (1986) compared the efficacy of four learning strategies: question-answering, rereading, student construction of maps, and rehearsing using teacher-constructed maps. Results of the study suggested that instruction and practice in constructing maps improved the free recall of main ideas. Although the study attained significant differences in the free recall ability

of sixth-grade students, similar results have not been found in older students.

Secondary students in a study by Bean et al. (1986) were assigned to treatment groups designed to compare students who constructed graphic organizers with students who outlined as learning strategies with content area texts. The study showed that students receiving instruction in graphic organizer construction outperformed students using outlining on comprehension tests. However, the lengthy instructional time — 14 weeks — may limit the generalizability of the study since instructional time of this length may not be available in other secondary settings. In addition, students with the highest levels of achievement had received previous instruction for 14 weeks in summarization techniques.

Other variables could have had a bearing on the findings in this research. First, research studies that tested the effectiveness of graphic organizers on comprehension from the standpoint of text structure (Alvermann, 1981,1982, 1988; Alvermann & Boothby, 1983, 1986; Bean et al., 1986; Berkowitz, 1986) neglected to measure students' prior knowledge of text structure. In addition, these studies provided no instruction, training, or activation of prior knowledge concerning the purpose and use of text structure. Without explicit instruction, students may not have been cognizant of the graphic organizers' function as related to text structure. Students presented with graphic organizers prior to reading may not have known how to connect the structure of the organizer with

that of the text. Students constructing graphic organizers during reading may not have known how to use the structure of the text in order to construct their own organizers. Interestingly, of the students ,who constructed organizers, one group had received prior instruction in using the text structure for summarization and another group was required to use text structure, although not directly trained to do so (Bean et al., 1986). Both groups that constructed graphic organizers outperformed students in another treatment group on a comprehension measure. Second, research studies couched in schema theory that presented graphic organizers prior to reading use organizers that are constructed by the teacher/researcher. These organizers are developed according to the knowledge, understanding, and schemata of the teacher/researcher and may not activate the appropriate schemata in students. The assumption being made with teacher/researcher-constructed graphic organizers is that the schema targeted for activation by the organizer is in fact the schema that is activated. To be certain that the appropriate schema is being activated, graphic organizers would need to contain vocabulary terms or concepts with which students are familiar and have established schemata.

However, Barron (1969) advocates the incorporation of higher level vocabulary words in graphic organizers —words that are not being pre taught as part of the lesson. Practices such as this increase the possibility that the appropriate schema is not activated in students. Another concern is that according

to schema theory, a schema must be existent in order for new information to be assimilated with subsuming concepts. However, graphic organizers do not determine the presence of schemata; they assume that schemata exist. Therefore, if a student has not experienced riding on a subway and does not have a schema for the concept, a graphic organizer will be of little benefit in activating prior knowledge.

There have been many studies on students with and without learning disabilities from all grade levels and a variety of subjects concerning the use of graphic organizers. There is ample research that documents a solid scientific basis for improving reading comprehension, increasing process writing skills, increasing thinking skills, and increasing learning of content-area subjects. Research to date supports the use of graphic organizers with students with learning disabilities in a variety of contexts. For instance, graphic organizers are believed to improve reading comprehension by emphasizing text structures such as story maps (e.g., Boyle, 2000; Burns et al., 2004), and also improve different aspects of comprehension, such as literal and relational comprehension, recall, and vocabulary learning (e.g., DiCecco & Gleason, 2002; Swanson et al., 1987). Graphic organizers (GO's) paired with strategy instruction can be more effective than traditional basal instruction (e.g., Bos & Anders, 1990; Darch & Gersten,

1986), and can be used effectively as advance organizers prior to reading (e.g., Simmons et al., 1988). It is also believed to improve written comprehension. GO's used as planning tools containing prompts for goal setting, brainstorming, and organization of ideas can improve writing performance (e.g., Baker et al., 2003; Troia & Graham, 2002). GOs can also improve writing performance when used to depict text structures (i.e., hierarchic, compare/contrast, cause/effect, sequence) and prompts to plan, organize, write, edit and revise written products (Englert et al., 1991). GOs can also improve adolescents' self-perception of themselves as empowered writers (Hallenbeck, 2002); when coupled with strategy instruction, GO's can improve writing fluency (Graham et al., 1995; Montague & Leavell, 1994).

Additionally, GO's improve content learning. GO's can help elementary and secondary students learn significantly more social studies and science concepts and facts (e.g., Darch & Carnine, 1986; Snead & Snead, 2004), as well as content area vocabulary (e.g., Bos et al., 1989; Robinson & Katayama, 1998). GO's also increase understanding of the relationship between ideas (e.g., DiCecco & Gleason, 2002; McCoy & Ketterlin-Geller, 2004) and increase transfer of problem-solving ability (e.g., Lenz et al., 1994).

Although ample research has demonstrated the positive impact of graphic organizers on relatively short-term academic measures, the long-term effects on

students' strategic learning behaviors, information processing skills, and higher-order learning skills are not known.

To date, studies have investigated the impact of graphic organizers within specific domains of learning (e.g., used for reading comprehension, composition writing, content learning). Little is known about the impact of these tools when they are thoroughly integrated horizontally across the curriculum (e.g., used for reading comprehension, composition writing, and content learning) and vertically (i.e., across grade levels).

A research study conducted by the Institute for the Advancement of Research Education (IARE) identified 29 studies that support the effectiveness and use of visual learning techniques such as graphic organizers. The studies showed that the use of visual aids increases performance in the area of reading comprehension and retention. They also showed students improve thinking and learning skills, including organizing material and communicating ideas, recognizing patterns and relationships and categorizing material.

Chapter III

Research Methodology

This chapter presents the research design, respondents, instruments, stimulus materials, and data gathering procedure to attain the objectives of the study.

Design

A descriptive-qualitative design was used in the study to help improve comprehension of grade six pupils by using graphic organizers as a scaffold in reading instruction.

Instruments

A 50-item post-test parallel to the pre-test was constructed and administered after the 15-day reinforcement lessons using graphic organizers. The reading skills included in these tests were noting details, sequencing events, getting main ideas, and constructing meaning from the selection. The post-test results were compared with those of the pre-test to check whether there was an improvement in comprehension among the pupils.

Another instrument was a Checklist on the Effective Use of Graphic Organizers, which consisted of ten (10) statements about what pupils thought or

felt about graphic organizers. This was given after all the lessons were discussed to complement the quantitative 50-item post-test. Pupils were asked to rate each statement from strongly agreeable, moderately agreeable, and not really to reveal their ideas about graphic organizers. (Please refer to Appendix for the instrument.)

Still another instrument was a Narrative Story Retelling Rubric to assess pupils' comprehension of narrative texts. (Please see Appendix).

Finally, a 10-item post-lesson evaluation was also given to check comprehension after each use of graphic organizer. This was done to monitor on a regular basis the pupils' growth in reading. While the first instruments were accomplished after all the reinforcement sessions, this final instrument was given after each lesson.

Stimulus Materials

Several reading selections chosen from the grade level books not currently used by the target respondents served as stimulus materials. These became the source of information included in the graphic organizers as instructional tool for comprehension improvement. These were divided into two text types- informational and narrative texts for varied applications of graphic organizers. These materials were as follows:

A. Informational Texts

1. Learning To Be a Rock Hound
2. The Voyage of Christopher Columbus
3. Titanic's Tragedy
4. Global Warming
5. Bats
6. Whales
7. Plants

B. Narrative Texts

1. The Burning of the Rice Fields
2. The Gardener's Robe
3. The Swan's Gift by Brenda Seabrooke
4. The Legend of the First Banana (A Filipino Folk Tale)
5. The Waiting Day by Harriett Diller
6. A Letter to God by Gregorio Lopez y Fuentes
7. The Miracle

Respondents

There were 30 respondents. All of them belonged to a heterogeneous class of grade six section one of Cataning Elementary School. The class was chosen for convenience and accessibility since it was handled by the researcher and the activities could easily be made a part of the language and reading lessons.

Data Gathering Procedure

The following were the steps and processes done to attain the objectives of the study.

1. Selections of the stimulus materials

The stimulus materials were the narrative as well as the informational text types used in the course of the study. These were deliberately chosen as guided by several criteria. One, the materials should be new to the readers. They should have been encountered for the first time in the study. Second, they should be leveled according to the grade level of the respondents; consequently, the actual textbooks used were not considered. Instead, books from other publishers were consulted. Third, a balance between narrative and expository texts need to be attained so as not to show partiality for only one text type.

2. Preparation of Instruments

For the pre-test, the table of specifications was consulted to prepare a parallel post-test. The comprehension skills were identified and the number of items were determined so as to capture what the pre-test contained.

The instruments for qualitative assessment such as Checklist on the Effective Use of Graphic Organizers and the Narrative Retelling Rubric were adopted.

The 10-item comprehension check after each session was also drafted, which focused on the skills contained in the post-test.

3. Validating the instruments

All the selected reading selections, the comprehension tests used both pre and post, the graphic organizers, rubrics for retelling, and the checklists were shown to the intermediate reading teachers of the school, the Division English Specialist, Dr. Felicisima R. Oria, and the officers of the Division Association of Elementary English Teachers for evaluation and validation of all the materials and instruments.

Suggestions on leveling the text types and toning down the questions were given consideration in adherence to the results of the validation.

The stimulus materials and instruments were piloted to other grade six class from another school to further check their suitability for the subjects understanding.

3. The Reinforcement Sessions

The reinforcement sessions were conducted in the teacher-researcher room for 15 consecutive days using the allotted time for remediation in the class program every afternoon for 40 minutes.

After the pre-test, the grade six pupils were subjected to the reading or reinforcement sessions for 15 days. They were given varied informational as well as narrative texts with corresponding graphic organizers prepared by the teacher and distributed to the pupils while they were reading.

The teacher-researcher facilitated the reading process through discussions of the reading text read and the checking of the pupils' answers on the graphic organizers. These were done for the first twenty minutes of the session, then the retelling guided by the organizer followed next. Finally, a ten-item comprehension questions were given after each session to gauge improvement in comprehension, if there was any.

4. The Documentation of the Data Gathered

The graphic organizers used were compiled and the respondents' scores were considered to note down the range of the pupils' ability to search for the important details asked in the graphic organizers.

The checklist and the retelling rubrics used for every session were also kept for reference and analysis of data in this study.

The scores for the ten-item comprehension test given after each reading session were also tabulated as reference for analysis.

5. Statistical Treatment of Data

The data gathered were analyzed for the purposes of seeking answers to the questions presented in this study. After the tabulation of all the data, the study used frequency, percentage, mean, and ranking prior to the analysis and interpretation.

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Chapter IV

Presentation, Analysis and Interpretation of Results

This chapter discusses the data gathered and presents the results of the findings to answer the questions raised in the study.

The general objective of this paper was to help improve the comprehension of grade six pupils by using graphic organizers as a scaffold for reading instruction.

Objective 1: Determine grade six readers' comprehension level

As is the practice of every school, a pre-test was administered each opening of classes to identify areas of pupils' strengths and weaknesses to adjust instruction early enough in the curriculum.

As regards reading pre-test, the following comprehension skills were among the priority in the list of 50-item test. Table 1 shows a modified table of specifications of the reading pre-test.

Table 1. Reading Pre-Test Table of Specifications

Comprehension Skills	Test Placement	No of Items
1. Noting Details	1-10, 36, 46-47	13 (26%)
2. Sequencing Events	28-30	3 (6%)
3. Getting the Main Idea	11-18,31-35	13 (26%)
4. Constructing Meaning	19-27, 37-40	<u>21 (42%)</u>
from a Selection	41-45,48-50	50 items

From the table shown, it is observed that the reading skills were divided into four general skills such as noting details, sequencing events, getting main ideas, and constructing meaning from the selection. Of these skills, 21 items or 42% were on meaning construction. With almost half of the items devoted to this skill, it might be construed that this was one important and priority skill to develop among target pupils.

Another skill was noting details with 13 or 26% and still with the same percentage was the skill on getting main ideas. These two are very much connected skills because knowledge of the main ideas would necessarily direct readers to the support ideas expressed by the writers.

The skill with the least item was on sequencing events, with only 6% in the total items. This could be because it is considered a literal skill which should have been developed even prior to the sixth grade. Perhaps the inclusion of this skill was to ensure its mastery as an entry level to the next grade.

The pupils took the reading pre-test which included four general reading skills spread across the total 50 items administered by the school. How the grade six pupils fared is the next concern of the study to determine their comprehension.

The next table presents the results of the pre-test. The table reveals the highest score and the lowest gained, the mean, and the mean percentage score (MPS).

Table 2. Results of the Pre-Test		
Respondents	-----	30
No of Items	-----	50
Highest Score	-----	33
Lowest Score	-----	15
Mean	-----	25.37%
MPS	-----	50.74%

Out of 50 items, the highest score attained was 33 or 66%, which was a bit higher than the median but still quite below the 75% cut-off to pass the test. This meant that the grade six pupils were way below the mastery of the comprehension skills tested. Many studies already suggested that pupils hardly master the target minimum competencies of their level because of educational, social, and affective factors in reading particularly, and in education generally. This was one reason studies on action research have to be embarked on as a positive action for solution rather than just an awareness of the problem or diagnosis of weaknesses.

On the other hand, the lowest score earned was 15 or 30%, which was a flooring grade considering that the pupils were about to enter high school. Again,

this dismal score was no longer a news since national surveys and assessment found this to be the case. For instance, using PHIL-IRI (Philippine Informal Reading Inventory), the Department of Education (DepEd) had already shown that many pupils were in the frustration level. As already pointed out, more action research addressing such findings is the call of public schools.

All in all, the pre-test results manifested the lack of mastery of the comprehension skills among grade six pupils.

Objective 2. Use graphic organizers in reading instruction for improved comprehension

The reinforcement reading sessions commenced on the 3rd week of January up to the last week of February. A pre-test was given to the respondents to determine the pupils' entry level in comprehension prior to the duration of the study.

The researcher used the allotted 40 minutes for remediation every afternoon in the class program before dismissal time for the reading of the selected stimulus materials and accomplishing of the graphic organizers.

After a couple of weeks, the researcher gave the post test and recorded pupils' scores to see significant increase if there was any and to establish the reasons why there were pupils who did not demonstrate an increase in their comprehension.

The researcher conducted interview and recorded the number of minutes that the respondents finished the accomplishment of the graphic organizer and the type of reading materials they were reading. There were 10 varied reading selections, five of which were expository or informational text type and the other five were narrative texts. The expository texts used graphic organizers such as concept maps and semantic web, while the narrative texts were supported by character map, action map, conflict dissection, story map and Herringbone organizer to scaffold comprehension.

The entire duration of the reading sessions lasted for 42 days including the retelling sessions, discussion of their answers in their graphic organizers, short comprehension test, and accomplishing of the checklist and questionnaires.

As stated earlier, a 10-item comprehension check after each reading selection was administered to monitor the pupils' interaction with text and to observe any growth shown during the session.

The 10-item comprehension check was one way of recording quantitative scores of the pupils after each reading selection. Again, a balance of narrative and expository informational texts was attained by providing selections that were of these categories.

The table that follows shows the pupils' comprehension score for each selection.

Table 3. Comprehension Test Results for Each Selection

Selections / Scores	10	9	8	7	6	5
Informational Texts	0	28 (93%)	0	2 (7%)	0	0
1. Learning to be a Rock Hound	0	24 (80%)	3 (10%)	3 (10%)	0	0
2. The Voyage of Christopher Columbus	1 (3%)	23 (77%)	4 (14%)	1 (3%)	1 (3%)	0
3. Titanic's Tragedy	16 (53%)	10 (33%)	2 (7%)	2 (7%)	0	0
4. Global Warming	9 (30%)	15 (50%)	3 (10%)	1 (3%)	2 (7%)	0
5. Bats	15 (50%)	2 (7%)	5 (17%)	4 (14%)	4 (14%)	0
6. Whales	10 (33%)	10 (33%)	8 (26%)	2 (7%)	0	0
7. Plants	Narrative Texts					
8.The Burning of the Rice Field	15 (50%)	10 (33%)	3 (10%)	2 (7%)	0	0
9.The Gardener's Robe	12 (40%)	8 (26%)	6 (20%)	4 (14%)	0	0
10. The Swan's Gift	11 (37%)	10 (33%)	8 (26%)	1 (3%)	0	0
11.The Legend of the First Banana	12 (40%)	8 (26%)	5 (17%)	3 (10%)	2	0
12. The Waiting Day	19 (63%)	4 (14%)	3 (10%)	2 (7%)	2 (7%)	0
13. A Letter to God	25 (81%)	3 (10%)	1 (3%)	2 (7%)	0	0
14.The Miracle	20 (64%)	5 (17%)	4 (13%)	1 (3%)	0	0
15. Sweet Aurora	18 (63%)	6 (20%)	5 (17%)	0	0	0

From the table, it could be seen that no pupil scored lower than 6 out of ten items. Although there were some selections with no perfect score earned by the pupils, specifically the informational texts 1 and 2, the rest of the selections was answered with the perfect score by the grade six respondents.

Analysis of the scores based on text type starting from informational texts revealed the following major findings:

For the first selection “Learning to be a Rock Hound,” no one got a perfect score, while 28 pupils or 93% got a score of 9 or 90%. The lowest score earned was 7 or 70% by 2 or 7% of the respondents. This meant that the score of the majority was high interpreted as an independent reading level.

For the second selection “The Voyage of Christopher Columbus”, no one got a perfect score again, while 24 pupils or 80% got 9 or 90% of the comprehension test. Also, there were 3 pupils each or 10% with a score of 80% and 70% respectively. Again, this indicated appositve growth in comprehension since majority got a 90% score.

For the third selection “Titanic’s Tragedy”, one pupil or 3% got a perfect score this time. Majority of the pupils, 23 or 77% scored 90% , 4 pupils or 14% scored 80%, while one pupil each or 3% got 70% and 60% respectively. This showed that one pupil was still low, yet one already perfected it, as many of them were in independent reading level now.

For the fourth selection “Global Warming”, 16 pupils or 53% scored 100%. This was the selection with the most number of students who got a perfect score perhaps because they were already familiar with it. Ten (10) pupils or 33% scored 90%, and 2 each got 80% and 70% respectively. This indicated an

increasing number of pupils getting higher and higher scores as they read informational texts supported by graphic organizers.

For the fifth selection “Bats”, 9 pupils or 30% scored 100%, 15 pupils or 50% scored 90%, while 3 pupils or 10% got 80%, 1 scored 705 and 2 got 60%. This result indicated yet another positive change in the pupils’ comprehension level. More and more tended to get perfect scores while less and less scored dismally.

For the sixth selection “Whales”, 15 pupils or 50% scored 100%. This was the second selection where majority of the students got a perfect score perhaps because aside from graphic organizers, pupils brought with them their interest to the topic which positively influenced their comprehension.

On the seventh selection “Plants”, 10 pupils or 33% each got 10 and 9 correct answers respectively. 8 pupils or 27% got 8 and 2 or 7% scored 7. These scores revealed a great improvement in the comprehension scores of pupils.

Looking at the patterns of the scores the pupils got in reading informational texts, it could be observed the jump from zero to increasing or higher scores as they experienced the texts themselves. Their exposure to the text type and the accompanying visual organizers seemed to work in making them understand what the text was about.

As regards the reading of literary texts, the pupils scored better and higher in this text type. For the first story “The Hunting of the Rice Field”, 15 or 50% of

the pupils got a perfect score or 100% correct answers. Ten or 33% of the pupils scored 90%, 3 or 10% of the pupils scored 70% and 2 or 7% of the pupils got 70% correct responses. The scores of the pupils in this text type improved greatly.

For the second story “The Gardner’s Robe”, 12 or 40% of the pupils score perfect, 8 or 27% got 90% correct answers, 6 or 20% got 80% correct answers, and 4 or 13% got 70% correct answers. Noticeably, the pupils’ scores got better.

For the third story “The Swan’s Gift”, 37% got a perfect score, 33% scored 90%, 27% scored 80%, and only 3% scored the lowest at 70%. Again, although the lowest was at 70% correct answers, this showed an improvement in understanding the story when the accompanying teacher-prepared graphic organizers were utilized to scaffold the readers’ meaning-making process.

For the next story “The Legend of the First Banana”, 40% perfected the test, 27% scored 90%, 17% scored 80%, 10% scored 70%, and the lowest score of 60% was earned by 6% of the pupils.

The fifth story “ The Waiting Day” had the following scores earned by the pupils: 63% perfected the test, 13% got 90% correct answers, 10% scored 80%, 6% scored 70%, and another 6% got 60%. This revealed how children’s use of graphic organizers aided their understanding which was translated into higher scores in reading.

The sixth story “A Letter to God”, 81% got a perfect score, 10% scored 90%, 3% scored 80%, and 6% got 70%. This story recorded the most number of

pupils who got a perfect score, and the lowest score earned in this test was still high compared to the scores in other selections.

The seventh story “ The Miracle” had 64% of the pupils getting a perfect score, 17% with 90% correct answers, 13% with 80% score, and only 1 or 3% with a score of 70%. This shows a positive improvement in the comprehension score of the pupils, especially as they got used to the organizers as aid for understanding.

The last story “ Sweet Aurora” had 63% of the pupils with a perfect score, 20% with a score of 90%, and 17% with 80% correct answers. This story showed that the pupils’ comprehension score with 80% as the lowest proved that pupils eventually tended to improve dramatically such that all of them got a passing score.

Overall, the pupils’ scores in literary texts proved to be higher than those of the informational texts. It could also be observed that the scores had a direct proportional relationship to their exposure to advance organizers. The more experiences given them in using organizers, the higher they scored in the comprehension test.

Likewise, as far as literary texts were concerned, the pupils’ lowest score was still high at 60% since not one of them got lower than 50%. It could be that the organizers worked better with narrative than with expository selections.

Nevertheless, the scores in both text types were a big jump from their pre-test scores, revealing how teacher scaffolding such as the use of organizers positively influence pupils' retention of important ideas which in turn help improve their comprehension scores.

From the quantitative data showing how the children's comprehension increased, the study's other concern was the qualitative data, specifically on the perception of pupils about the use of graphic organizers. To gather data, the study made the pupils answer the checklist on the use of graphic organizers as a way of triangulating quantitative data with a qualitative one.

The table below indicates the level of the pupils' agreement with the statement on the effective use of graphic organizers from SA (strongly agreeable), MA (moderately agreeable), and NR (not really).

Table 4. Checklist on the Effective Use of Graphic Organizers

MEASURES	SA	MA	NR
1. The organizer is helpful in noting details.	25 83.33%	3 10%	2 6.66%
2. I can easily recall facts because of the graphic organizers.	26 86.66%	3 10%	1 3.33%
3. My GO is most effective in stories.	22 73.33%	6 13.33%	2 4.44%
4. The organizer is most helpful in informational texts than in stories.	20 66.66%	5 16.66%	5 16.66%
5. My organizer helps me to understand the reading selection well.	23 76.66%	7 23.33%	2 4.44%
6. The GOs are great tool to make connections among concepts.	25 83.33%	3 10%	2 6.66%
7. I have put enough information in each section to do a good job when I use this organizer to retell the story I read.	24 80%	4 13.33%	2 6.66%
8. I have filled out all areas I am supposed to fill out.	26 86.66%	2 6.66%	2 6.66%
9. I like to use a graphic organizer every time we have a reading session.	30 100%	0	0
10. My organizer helps me to summarize the reading selection well.	27 90%	2 6.66%	1 3.33%

The responses given by the pupils revealed their favorable perception on the use of graphic organizers as a way of improving understanding of the texts. They were strongly agreeable to the use of graphic organizers and these did help in understanding the reading selections.

A closer look at these responses showed that majority of the pupils had a positive perception of the importance of graphic organizers in interacting with texts.

Arranged according to rank, the statements with the most number of pupils who were strongly agreeable to the use of graphic organizers were number 9, 10, 8, 2, 6, 1, 7, 5, 3, and 4. It can be observed that the statement with the highest rating given on the use of organizers was on raising the interest and motivation of pupils to read – “ I like to use a graphic organizer every time we have a reading session.” Based on this response, it could be inferred that one importance of GO was to have pupil engagement with the text as they came to have interest and motivation caused perhaps by the unique way of textual presentation- highly visual and less running text.

The next seven statements with favorable responses focused on the improvement of comprehension skills on noting details, establishing connection, recalling facts, and applying study skills. These revealed that aside from engagement, the pupils found the GO helpful in developing their skills while simultaneously processing the text for comprehension.

However, the last two statements with the least favorable responses were about the text types. Apparently, the pupils favored GO more in literary texts than in informational texts. Although this finding was in consonance with other

research findings, this somehow raised an alarm in reading instruction because the demands for informational text processing increases as learners advance to higher level. Perhaps pupils need more practice with informational text reading aided by GO to somehow balance the reading diet of pupils.

Still another qualitative mode of data gathering was making the pupils retell the selections read. Only volunteer pupils were asked to retell what they understood to present sample cases of how comprehension was influenced by organizers. To evaluate the retelling of volunteer pupils, a rubric was used in gauging comprehension. (Please see Appendix for the rubric).

Using the graphic organizers as guide for unprompted retelling, most of the pupils scored between 16 and 20 points whose descriptive interpretation was equal to good and very good comprehension and retention of ideas learned from reading. Again, although only a few samples were made to retell as volunteer pupils, the quantitative scores earned by the pupils strongly suggested improved comprehension when the graphic organizers served as springboard for sharing and following the authors' ideas when retelling. Pupils perhaps became confident in sharing their thoughts especially so when the ideas were visually presented in ways they are comfortable with.

Objective 3. Find out the effect of graphic organizers on comprehension of grade six pupils

The results of the post test given to the pupils validated the findings of the formative quantitative and qualitative data collected during the reading sessions conducted. The table below shows the post test results.

Table 5. Post Test Results		
Respondents	-----	30
Number of Items	-----	50
Highest Score	-----	49
Lowest Score	-----	31
Mean	-----	46.67%
MPS	-----	93.33%

The table shows that the mean percentage score (MPS) in the post test was 93.33%, while it was only 50.74% in the pre test. The high post test score was a leap frog from the pre test score. The pupils were not stagnant in their reading growth specially when scaffolding such as the use of graphic organizers were incorporated in lesson presentation for engaged discussion and purpose-driven processing of texts.

The next table compares the pre test and post test scores of the pupils after more than 10 days of exposure and experience with GO.

Table . Pre and Post Test Score Comparison

Item	Pre Test	Post Test	Difference
Lowest Score	15	31	16
Highest Score	33	49	16
Mean	25%	47%	22%
MPS	51%	93%	42%

The data presented from the reading sessions to the post test scores spoke of one finding- that GO as a scaffold provided by teacher in classroom instruction helps pupils understand the selections better. Such understanding could have led them to engage more into reading and to focus more on ideas which run parallel to what the authors deem important. Despite the fact that GO's were teacher-driven comprehension passed on to pupils to guide interaction, these could be translated later on as learning strategy of the pupils.

The table shown attested to the difference in scores earned before and after the reading sessions with graphic organizers. Comparatively, the gains from exposure and experience with GO's seem to suggest that the teacher's efforts to go the extra mile paved the way for the learners' engagement with text,

improvement of comprehension and study skills, and adjustments to text types. Further, the great difference in the scores spoke of the role of visuals in aiding running texts by helping learners follow the authors' textually important ideas, interacting with and among literacy participants, gaining confidence when retelling, and most of all increasing pupils' comprehension scores.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATION

This chapter presents the summary, conclusions and recommendations drawn from the results of the study.

Summary

This descriptive study was conducted to determine how the use of graphic organizers help increase the comprehension level of selected thirty grade 6 pupils in Cataning Elementary School for the school year 2011-2012.

Instruments to gather qualitative data were used to check the pupils' perception about graphic organizers, and the pupils' comprehension was checked through retelling whose scoring was guided by retelling rubric. Finally, the pre-test and post-test scores of the pupils were compared to check whether there was an improvement in comprehension possibly attributable to the scaffolding provided by the teacher in the form of graphic organizers.

The data gathered proved that the graphic organizers were good visual aids that helped the respondents in retaining information for the retelling sessions and in understanding as shown in the results of their scores for such reading comprehension tests given every reading session. Combined with verbal

instructions, graphic organizers could be powerful tools to help increase pupil's understanding and retention of information.

Findings

The major findings of the study were as follows:

1. The grade six pupils who were the respondents of the study had a mean percentage score which was lower than expected of their grade level when tested on reading skills such as noting details, sequencing events, getting main ideas, and constructing meaning from texts.
2. The graphic organizers used by the teacher as a scaffold increased the pupils' ability to comprehend as revealed by their retelling of selections read and their scores in comprehension test after each reading session.
3. The pupils had a positive perception about graphic organizers as an aid in retaining information, raising their interest, experiencing engaged reading interaction, improving reading skills, and comprehending texts better.
4. The post-test score of the pupils was at par or even higher than expected by their grade level after the conduct of reading sessions using graphic organizers. Even the retellings showed recall of important ideas and details cued by the authors.

Conclusions:

Based on the results of this study, the following conclusions were formulated:

1. Many grade six pupils still lack skillful use of reading skills to aid their meaning construction when reading. They hardly meet the reading level competency of their grade level. When their reading needs are not met immediately, they are inclined to perform low as a manifestation of their weak grasp of important tools for reading and learning.
2. Teacher scaffolding, especially the use of graphic organizers, help increase the classroom reading performance of the pupils. Combined with verbal instructions, graphic organizers facilitate high engagement of pupils with text, ignite their interest in reading, improve their retention of significant information, and increase their comprehension.
3. Pupils tend to manifest great improvement when teachers apply appropriate scaffolds in reading instruction. They tend to exhibit the same enthusiasm that the teacher has to meet expectation and to parallel teacher preparation with high motivation and good comprehension. They tend to learn and to go where the teacher leads them at varying speed and performance.

4. The pupils' case of weak mastery of reading skills can be circumvented by the teacher's effort to address the weakness, arrest it by providing extra input and well-prepared scaffolds such as having graphic organizers.

Recommendations:

In the light of the findings, analysis of data and conclusion of the study, the following are recommended:

1. Encourage the use of graphic organizers in all levels to scaffold the reading difficulties of the poor readers.
2. Continue using graphic organizers for learners who are fast readers for a more effective and efficient comprehension of various texts.
3. Provide more graphic organizers for processing informational texts so that pupils' experiences with them can serve as a tool for independent learning in high school and college.
4. Advance the planning of various organizers for different content areas to facilitate retention and comprehension of ideas and distribute these to teachers as teaching materials in the classroom.
5. Conduct research on the use of graphic organizers in Filipino for better understanding of concepts in the content areas.
6. Design a true experimental research to quantitatively validate the results of the study.

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