The Use of Graphic Organizers in The Development of EFL Reading Comprehension

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Abstract

This study investigated how the use of GOs helped EFL university students(18-22 years old) of beginner level in the development of the reading comprehension skill. A control group and an experimental group participated in a pre-test at the beginning of the course and a post-test at the end. During this period, the experimental group went through six reading activities which involved the use of GOs for reading comprehension. Additionally, a test to qualify their level of satisfaction in the use of this strategy was applied to the experimental group. Results showed that the experimental group improved meaningfully their performance through the six structured reading activities; furthermore, from the pre-test to the post-test the difference was higher. On the other hand, the results of the control group were very poor. Regarding their level of satisfaction, the use of GOs for the development of reading comprehension was very high with the suggestion to continue working with them in other areas of knowledge as well as the production of their own GOs according to their needs.

Key Words: Graphic organizers, reading comprehension, EFL (English as a Foreign Language)

Resumen Ejecutivo

El presente trabajo analizó la forma en que los organizadores gráficos (GO) contribuían al desarrollo de la habilidad de lectura comprensiva en el aprendizaje de inglés como lengua extranjera (EFL, English as a Foreign Language) en estudiantes universitarios de nivel básico, comprendidos en edades entre 18 y 22 años. En la investigación participaron dos grupos, uno de control y el otro experimental; ambos grupos estuvieron involucrados en dos exámenes, un pre-test al inicio del período y un post-test al finalizar. Durante este período, se trabajó con seis actividades programadas que incluían el uso de organizadores gráficos para la lectura comprensiva. Además, a este grupo se aplicó otro test para evaluar su nivel de satisfacción en el uso de esta estrategia. Los resultados demostraron que el grupo experimental mejoró significativamente su desempeño a través de las actividades estructuradas, y la diferencia fue aún más evidente del pre-test al post-test; en cambio en el grupo de control los avances fueron mínimos.

Con respecto al nivel de satisfacción en el grupo experimental, el uso de los organizadores gráficos (GOs) para la lectura comprensiva fue alto con la recomendación de que se continúe utilizándolos, no sólo en el aprendizaje de inglés sino también en otras áreas del conocimiento; además se sugirió la producción de sus propios organizadores de acuerdo a sus necesidades.

Palabras clave: Organizadores Gráficos (GO), Lectura Comprensiva EFL (siglas en inglés de Inglés como Lengua Extranjera)

Introduction

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Reading is a crucial activity in the development of the acquisition of a language and teachers are concerned with finding a suitable approach to use with his students in order to get effective reading comprehension . Although necessary, reading is usually seen by L2 learners as a tedious activity, mainly if this is extensive. One of the alternatives is the use of graphic organizers (GO) which seems to be a way to show a

story or a piece of reading has been grasped by the learner's mind.

Through this study, the researcher analyzes the use of GO in the development of EFL reading comprehension with L2 beginner students to show GO effectiveness in the development of the Readidng skill.

Literature Review

Dechant (1991), refers to the reading skill at the very beginning stage that "In the broadest sense, reading is the process of interpreting sense stimuli… reading is performed whenever one experiences sensory stimulation" because he considered the reading skill as a sensorial process to comprehend situations such as reading pictures, reading faces, reading symbols, reading gestures. Further he also mentions a higher stage in which there is a dynamic interaction between the reader's prior knowledge and the text; this way, the reading contacts the writer mentally. And (Schoenbach, Greenleaf, Cziko, & Hurwitz, Reading for Understanding , 2000) cited by Oktay Akarsu and Leyla Harputl in 2014 in their journal Perceptions of EFL Students toward Academic Reading, corroborates this definition when they assert that "Successful reading comprehension is a complete grasp of meaning in a text in which dynamic and growing appreciation of interrelationships in the text is required". But this is not that simple, an L2 learner needs to be motivated to find reading an enjoyable activity. Regarding this, (Grabe, 2004) suggests the promotion of intrinsic motivation as one of the main abilities that an L2 reader needs to develop. Motivating strategies help an L2 learner be interested in reading and get a good interrelationship with the text. However, a successful reading comprehension depends on the reader's background.

Appropriate prior knowledge is definitely an overwhelming need the L2 reader requires in order to process the written information and understand the writer's real message. According to (Dechant, 1991), meaningful reading depends on the reader's prior knowledge which is supported by the schema theory, and numerous studies have been done about the connections between the knowledge that the reader already possesses (it includes L1, cross-cultural knowledge, symbols, categories, meaning of individual words, etc.) and the new information in the written text which will help him to predict and infer facts to elaborate a meaningful reading.

Other authors (Carrell & Eisterhold, 1983), (Barrios Espinosa, 1996, págs. 239-), (Ajideh, 2003), (Al-Issa, 2006), (An, 2013) have made research on the schema theory and its contribution to reading comprehension.

(Landry, 2002) in his article Schemata In Second Language Reading says "this learning theory views organized knowledge as an elaborate network of abstract mental structures which represent one's understanding of the world." (Dechant, 1991) defines scheme theory as "a cognitive theory that emphasizes cognition; conceptual learning; the process of understanding; mental events; conscious experience; acquiring, processing, organizing, storing, and retrieving of information; thinking; reasoning; problem solving; and meanings." All this describes reading as a high-level thinking process as the L2 reader starts a series of connections even before the moment he gets in touch with the written piece, he interprets , analyzes, synthesizes, and is able to apply this knowledge and create new ideas about it.

Although the L2 reader has a background in his mind, it needs to be activated, and the role of the teacher is definitely decisive. (Landry, 2002) refers to this role "Language teachers should consider the different dimension added to the task of reading by students who have already developed a schema related to the topic in another language" it means L2 teachers must be aware of EFL readers needs and carry out the reading process by following a step-by-step procedure considering their prior knowledge and steps suggested by many authors, for example, (Graves & Graves, 2003) describe a process to be used with L2 learners,

it consists on a set of pre-reading, during-reading, and after reading activities designed to assist students in successful reading, understanding, meaningful learning, and enjoying a specific piece of text.

In the process of reading, the mind uses schemata or mental organization structures to interact with the new information and categorize it hierarchically from the highest level that is at the top (superordinate) to the lowest level that is at the bottom (subordinate); subcaterogories are called hyponyms and they can be represented as tree-like diagrams (Dechant, 1991). When the L2 reader is going through this process, he develops many different sub-processes such as comparing and contrasting, discovery of causes and effects, a whole and its parts, main idea and details, a sequence of actions in a story, etc. Additionally, when an L2 reader finds pictures or graphics in a story, he is sure he will find very interesting and relevant information, so he feels motivated and inspired to continue reading more sources to get more data and eventually create his own version. All this means the learner's schemata has been successfully activated and the teacher has the chance to take advantage to assess reading comprehension by using graphic organizers (GO).

Hall & Strangman (2008) state that "a graphic organizer is a visual and graphic display that depicts the relationships between facts, terms, or ideas within a learning task. Graphic organizers are also sometimes referred to as knowledge maps, concept maps, story maps, cognitive organizers, advance organizers, or concept diagrams;" under this concept, teachers can develop students' capacity to think visually by means of using these devices. In the same article, they say GO connect important words or statements to diagrams, show a process, or present a sequence, serve as excellent study guides, and can be used to present new information. Similarly, (Phillips, Foote, & Harper, 2008) cite (Clarke, 1991), (Dunston, 1992) who emphasize that the use of GO lead to higher level thinking and serve as reminder notes that promote learning.

Cleveland (2005) reiterates the phrase "a picture is worth a thousand words" as she considers human beings learn more when they visualize the object. (Glassgow, Cheyne, & Yerrick, 2010) include GO and specifically mind maps in their study to help students achievement; they mention that GO can be used "at any age and any stage of learning, from brainstorming ideas to presenting research findings." To design a GO, pictures lines, geometric figures, words or short phrases are included and Bloom's taxonomy is used as the basis to categorize information of a text or a short story. Thus, when L2 learners read, they are able to establish relationships between different elements, concepts, identify the main idea and the supporting ones, show the sequence of a story, set causes and effects, compare and contrast ideas, etc; in a few words, an EFL reader is able to organize ideas according to different contexts and needs. He synthesizes, analyzes, verifies, evaluates, and he is even able to create or propose solutions to some problems, so he can use a variety of GO on the basis of his need; he can use; Venn diagrams for comparing and contrasting, a fishbone to show cause and effect, a sequential map to narrate the chronological facts of a story, a web for identifying main ideas and supporting ideas, etc.

Many studies have been done around the effectiveness of the use of GO to improve students achievement in different areas. For example, (Strangman, Vue, Hall, & Meyer, 2004) have carried out a series of 13 studies, and 10 of them "elevated comprehension"; these studies were supported by many meta-analysis (Moore & Readence, 1984; Dexter & Hughes, 2011; Dexter, Park, & Hughes, 2011; Ciullo, 2013) cited by (Strangman, Vue, Hall, & Meyer, 2004) which found a consistent effect on comprehension. (Phillips, Foote, & Harper, 2008) report "the research on the use of graphic organizers in vocabulary instruction has yielded overwhelmingly strong results." Additionally, many other authors (Salazar & Galora, 2017),

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(Manoli & Papadopoulou, 2012) (Sam & Rajan, 2013), (Uba, Oteikwu, Onwuka, & Abiodun-Eniayekan, 2017), mention important contributions of GOs to the development of L2 reading skill.

Materials and Methods

Two groups of students between 18 and 22 years old, at elementary level of EFL learning at ESPE University took part in this study, one was the experimental group (13 students) and the other one was the control group (9 students).

This study took place during a semester; at the beginning, two pre-tests about reading comprehension were applied to two groups of students between 18 and 22 years old, at elementary level of EFL learning at ESPE University, one was the experimental group (13 students) and the other one was the control group (9 students). Then, six pieces of reading with GOs to show comprehension were administered only to the experimental group. At the end of this research, a post-test with the use of GOs was applied to both groups. Finally a survey to find out their feelings about the use of GOs for reading comprehension was administered to the experimental group.

All the pieces of reading were selected according to the participants' stage of knowledge of English, their interests and the needs of this research. These activities were mapped out by adopting the scheme proposed for scaffolding reading by (Graves & Graves, 2003), planning and implementation.

The methodology for this study was mixed: experimental because two groups were used and the data was processed with numbers; and ethnographic because a survey about satisfaction was analyzed in a qualitative way.

Results

The arithmetic mean of the pre-test and the post-test was calculated in both groups and the results were evident.

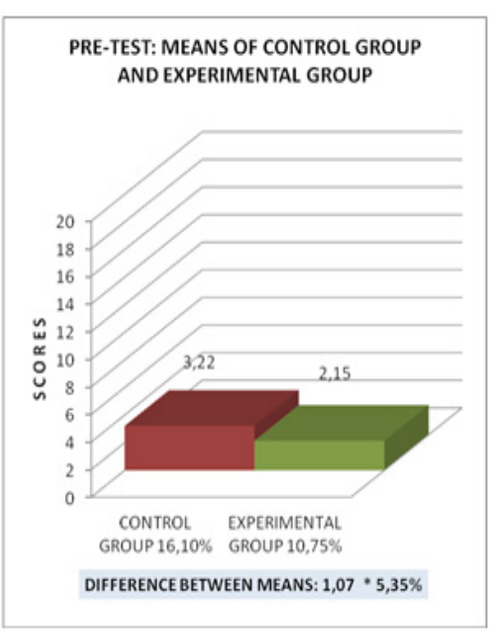


Figure 1: Graphic of Post-test of Control Group vs. Experimental Group

Source: Thesis "The use of Graphic Organizers to improve Reading Comprehension skills with students of I-II intensive courses at ESPE – Sangolquí – Ecuador, semester September 2010 – February 2011" by María Teresa Llumiquinga P.

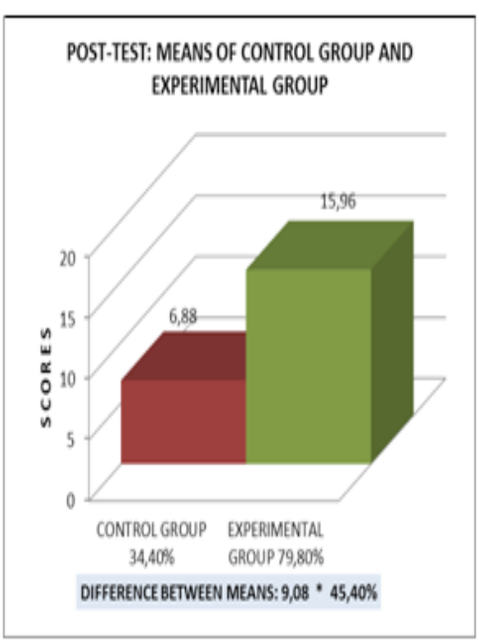


Figure 2: Graphic of Post-test of Control Group vs. Experimental Group

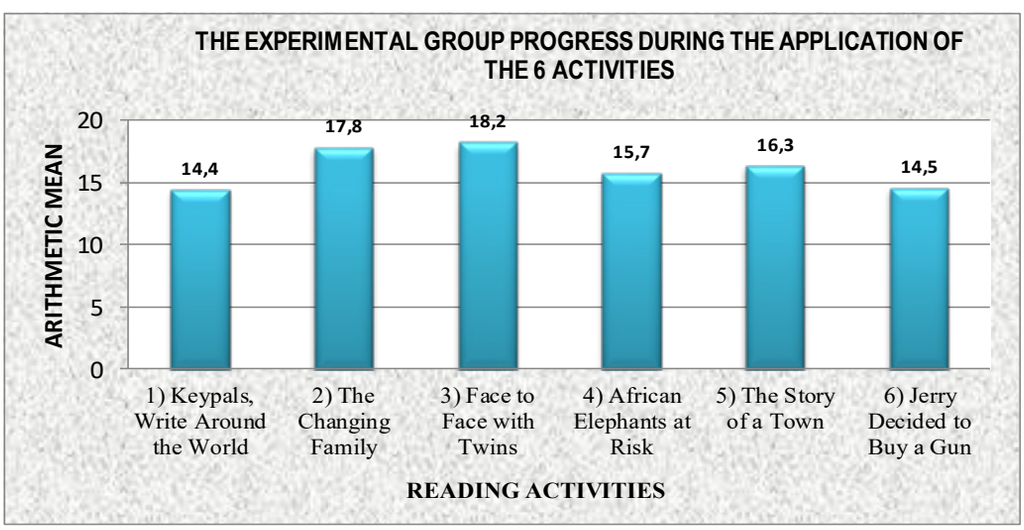
Source: Thesis "The use of Graphic Organizers to improve Reading Comprehension skills with students of I-II intensive courses at ESPE – Sangolquí – Ecuador, semester September 2010 – February 2011" by María Teresa Llumiquinga P.

At the beginning of the study, in the pre-test, both groups got very low results in reading comprehension; Control Group $\bar{X}$ = 3.22/20 (16.10%); Experimental Group $\bar{X}$ = 2.15/20 (10.75%).The difference between the means of both groups was slight, 1.07 (3.5%), in favor of the Control Group. So, it was similarly low before the application of GOs for reading comprehension (Figure 1)

After the application of the GOs, the progress that the Experimental got was noticeable; the mean of the Control group was $\bar{X}$ = 06.88/20 (34.40%), and the mean of the Experimental group was $\bar{X}$ = 15.96 (79.80%). There was a minuscule of the Control Group (3.66); meanwhile the Experimental group grew a 13.81 (61.95%).

At the end of the treatment of GOs in the Experimental Group, there was a big difference between the two groups, an advantage of 9.08 (45%) of the Experimental Group over the Control Group, (Figure 2).

Regarding the performance of the Experimental Group, in the 6 activities during the application of the GOs for reading comprehension, there was a great improvement in their comprehension from the first activity to the fifth one, in the sixth activity, there was a slight decrease in the mean of the last activity although the general average was always higher than 14.4 in every activity (Figure 3)



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Finally, the survey about their confidence in the use of GOs for reading comprehension was analyzed. It showed that, at the beginning, they were hesitant to use the GO; then, they were more motivated to work on this strategy; but they found it hard but challenging and definitely useful to improve reading comprehension.

Discussion

After reviewing several articles related to the use of GOs for the development of EFL reading comprehension, it can be argued that some of them reported high level of improvement while others, especially some addressed to lower grades of education; for example, ((Strangman, Vue, Hall, & Meyer, 2004) say that "the largest effects have been reported for university populations; consistent but more modest effects have been reported for students in elementary grades"; (Moore & Readence, 1984; Dexter & Hughes, 2011; Dexter, et al., 2011; Ciullo, 2013), cited by (Strangman, Vue, Hall, & Meyer, 2004) mention in their study that "There are consistent although more modest effects for elementary populations."

Assessment and the sense of sight for readers have been identified by (Glassgow, Cheyne, &

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Yerrick, 2010) as other weaknesses in the use of GOs as it is said that "a big problem with graphic organizers is assessment. Some students may look at the graphic organizer as just another assignment and not authentically engage in its construction;" and "Graphic organizers can be used at any age and at any stage of learning from brainstorming ideas to presenting research finding because visualization to learn is daily used by anyone who is able to see."

Limitations in this study

All the exercises for the application of this study were created by the researcher, students just completed the GOs after every short story, they did not design any GO to show their reading comprehension as it had already been designed by the teacher.

Another limitation was that GOs were only used as a post reading activity; they were never used as a pre-reading task or during reading exercise. It was not considered the chance to let students use technology to create their own GOs about different stories or texts.

Conclusions

Some articles reviewed have reported improvement in the skill of reading after the use of GOs, some others had a slight or modest improvement. The present study has shown that even both groups, the control group and the experimental group got extremely low and relatively similar results at the beginning of this research, after the application of GOs for reading comprehension in the experimental group, they experienced a significant increase in their performance and evidenced a great level of confidence in the use of these tools.

Limitations found in this study show clearly there is room for future research by allowing students to develop their skills in the construction of GOs for reading comprehension according to their own point of view; another area of inquiry will be the construction of GOs for reading comprehension in the EFL classroom with the use of technology.

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