



วารสารอิเล็กทรอนิกส์

ทางการศึกษา

ผลของการใช้แผนภูมิความคิดต่อการวัดความสามารถในการอ่านภาษาอังกฤษของนักเรียน  
ชั้นประถมศึกษา

## Effects of using Graphic Organizers on English Reading Ability of Elementary School Students

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**บทคัดย่อ**

การฝึกใช้แผนภูมิความคิดในขณะที่เรียนการอ่านนับเป็นการใช้เครื่องมือเพื่อช่วยอ่านที่เหมาะสมกับนักเรียนประถม จากงานวิจัยที่ผ่านมา (McKnight, 2010 and Willis, 2008) พิสูจน์ว่าแผนภูมิความคิดเข้ากับการทำงานของสมองในแง่ของการช่วยถอดความให้เป็นข้อมูลภาพ นอกจากนี้งานวิจัยอื่นๆ (Cox, 2011 and McKnight, 2010) ยังยืนยันผลของนักเรียนที่ฝึกใช้แผนภูมิความคิดในการอ่านว่าสามารถเชื่อมโยงเนื้อหาในบทอ่านได้ดีขึ้น ดังนั้นงานวิจัยฉบับนี้มีวัตถุประสงค์เพื่อศึกษาผลของการสอนอ่านภาษาอังกฤษโดยใช้แผนภูมิความคิดที่มีต่อความสามารถในการอ่านของนักเรียนชั้นประถมศึกษาปีที่ 5 นอกจากนี้ยังได้สำรวจความคิดเห็นเกี่ยวกับการใช้แผนภูมิความคิดในชั้นเรียนวิชาการอ่านภาษาอังกฤษของนักเรียนกลุ่มดังกล่าวด้วย กลุ่มประชากรตัวอย่างประกอบด้วยนักเรียนชั้นประถมศึกษาปีที่ 5 จำนวน 34 คนจากโรงเรียนเอกชนแห่งหนึ่งในกรุงเทพฯ ในภาคเรียนที่ 2 ปีการศึกษา 2556 เครื่องมือที่ใช้สำหรับการสอนในครั้งนี้ได้แก่แผนภูมิความคิดซึ่งประกอบด้วยแผนภูมิจำนวน 5 แบบ ได้แก่แผนภูมิแบบ Timeline, Descriptive, Compare-and-Contrast, Cause-and-Effect และ Problem-and-Solution แผนภูมิทั้ง 5 แบบนี้นำมาใช้เพื่อจุดประสงค์ในการพัฒนาความสามารถด้านการอ่านสำหรับเด็กเล็ก งานวิจัยนี้ใช้ทั้งเครื่องมือในการสอนได้แก่แผนการสอนการอ่านภาษาอังกฤษโดยใช้แผนภูมิความคิดเป็นเครื่องมือในการอ่าน และเครื่องมือสำหรับการเก็บข้อมูลได้แก่แบบทดสอบการอ่านวัดความเข้าใจฉบับก่อนเรียนและหลังเรียน (แบบคู่ขนาน) และแบบสอบถามความพึงพอใจต่อการใช้แผนภูมิความคิดซึ่งใช้ในชั้นเรียนการอ่านภาษาอังกฤษนี้ ระยะเวลาทดลองใช้เวลาทั้งสิ้น 13 สัปดาห์ สถิติที่ใช้ในการวิเคราะห์ความสามารถในการอ่านก่อนและหลังการทดลอง และการวิเคราะห์ความพึงพอใจเกี่ยวกับการใช้แผนภูมิความคิดในชั้นเรียนวิชาการอ่านภาษาอังกฤษคือ Descriptive Statistics และ Paired sample t-test ผลการวิจัยพบว่า 1) นักเรียนได้คะแนนเฉลี่ยจากแบบทดสอบการอ่านหลังการทดลอง ( $\bar{X}$ =11.82, S.D.=3.25) ซึ่งสูงกว่าคะแนนเฉลี่ยก่อนการทดลอง ( $\bar{X}$ =10.44, S.D.=3.23) อย่างมีนัยสำคัญทางสถิติที่ระดับ 0.05 โดยมีค่าขนาดของอิทธิพลในระดับปานกลาง ( $d = 0.43$ ) 2) จากการสำรวจความพึงพอใจเกี่ยวกับการใช้แผนภูมิความคิดในชั้นเรียนวิชาการอ่านภาษาอังกฤษ พบว่า นักเรียนมีความพึงพอใจต่อการใช้แผนภูมิความคิดทั้งในแง่ของการความพึงพอใจทั่วไป ( $\bar{X}$ =2.17, S.D.=.646) และในแง่ของความพึงพอใจที่แผนภูมิความคิดสามารถช่วยให้เกิดความเข้าใจในการอ่านเพิ่มขึ้น ( $\bar{X}$ =2.20, S.D.=.670) โดยพิจารณาตามเกณฑ์ Likert Scale (three-point Likert Scale)

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## Abstract

Graphic organizer used in reading instruction is claimed as an appropriate reading tool for young learners. According to the previous studies (McKnight, 2010 and Willis, 2008), the findings claimed that graphic organizers were compatible with the brain in term of helping equip the brain to interpret meanings from images better than texts. In addition, many studies (Cox, 2011 and McKnight, 2010) supported that many young learners who employed graphic organizers in reading were able to identify the connection and the content of the texts better. Consequently, the current study aimed to explore effects of graphic organizers on English reading ability of fifth grade students as well as to examine the satisfaction with using graphic organizers in the English reading course. The participants were 34 fifth-grade Thai elementary school students at a private school in Bangkok in the second semester of the academic year 2013. Five types of graphic organizers: Timeline, Descriptive, Compare-and-Contrast, Cause-and-Effect and Problem-and-Solution organizers were employed in the current study to enhance the young learners' reading comprehension ability. Two instruments were used in this study, firstly, the instructional instrument including lesson plan and, secondly, the research instruments including the English reading comprehension pretest and posttest (parallel forms), and the opinion questionnaire. The implementation lasted for 13 weeks. The collected data were analyzed using descriptive statistics to obtain means and standard deviations, including the paired sample t-test.

The findings revealed that 1) the participants gained higher scores on the English reading comprehension ability posttest ( $\bar{x}=11.82$ , S.D.=3.25) than the pretest ( $\bar{x}=10.44$ , S.D.=3.23) at the 0.05 significant level with the medium effect size ( $d = 0.43$ ). 2) According to the opinion questionnaire, the participants were generally impressed about using Graphic Organizers in reading instruction ( $\bar{x}=2.17$ , S.D.=.646). Moreover, the participants thought that graphic organizers really helped them to see the text structures and comprehend reading passages better ( $\bar{x}=2.20$ , S.D.=.670).

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**KEYWORDS:** GRAPHIC ORGANIZERS, COMPREHENSION ABILITY, YOUNG LEARNERS, ENGLISH  
READING INSTRUCTION

## Introduction

In the information age nowadays, most Thai people may not be able to avoid reading English materials that are around them since English has been the top first language used in both the Internet (Argaez, 2010) and printed materials (Anderson, 2008). As a result, the ability to read in order to acquire knowledge as well as to conduct their work and life is important for Thai people in all kinds of settings including educational settings, work places and daily life.

In Thai educational context, English reading materials are used either as the main or supplementary in many academic institutions especially in higher education. It is also a required subject in various examinations to assess whether students understand messages in various kinds of texts. The importance of reading ability to comprehend reading materials is reflected by the Basic Education Core Curriculum B.E. 2551 in all strands of foreign language learning area.

In the workplace contexts, Wongsothorn, Sukamolsoon and Chinthammit, (1996) revealed that English was the most generally used language in international business transactions. Moreover, English reading ability is considered as the most important skills required for various careers and professions. This is supported by Akkakoson (1993) that

employees with high level of English reading ability has been highly required by both government and private sectors in all kinds of positions such as engineers, academics or hotel personnel, etc.

Even in daily-life situations, Thai people can find many materials in English. In order to use a new electric appliance or keep up with the current situations, they may need to read instructional manuals for equipment, guidebooks or international magazines in English.

Besides the importance of reading for survival and success in various settings, reading ability can help enhance other skills and abilities particularly for the learning skills. According to Anderson (2008), reading ability can help strengthen other learning skills such as listening, speaking, writing and critical thinking. Moreover, Jubani, Lama and Gjokutaj (2012) found that students who were taught various reading skills and strategies had the opportunities to develop analytical and critical thinking.

Although English reading skills are important for Thai people, both undergraduate and graduate students were found to have English reading problems caused by the lack of knowledge of text structures and ability to identify key ideas within texts. The research studies by Chawwang (2008), Adunyarittigun (2002), Thanamaimas (2004), Rattanaseeha (2007) and Wongsuwan (1992) were concluded that both undergraduate and graduate students struggled with their English texts during reading since they did not know what the text structure was and how to employ knowledge of text structures to facilitate their reading. Additionally, Adunyarittigun (1998) and Jamonman (1994) indicated that students who could not observe or interpret text structures would have difficulty in reading comprehension. Moreover, Chawwang (2008) also revealed that the students could not comprehend the English texts because they could not identify topics and main ideas, summarize contents as well as apply appropriate reading strategies.

Based on these findings, this study aimed to explain ways to help support and enhance English reading comprehension ability particularly in the young learners. According to Cochrane (2010), a tool which was considered to help solve the reading problem mentioned earlier is graphic organizers since they can help divide information included in the text visually as well as represent text structure explicitly. Consequently a reading instruction using graphic organizers was implemented in one school in Bangkok with fifth grade students.

According to many research studies, the positive results of using graphic organizers to enhance reading comprehension ability for young EFL students were shown (Cochrane, 2010; Willis, 2010; Russell, 2010; Fealy, 2010). Besides the studies showing the effectiveness of using graphic organizers in English reading instruction, the critical age for effective learning of reading skills was mentioned. Chall (1996) supported that the significant age to learn language skills effectively is between 7 and 13 years old. Similarly, Best, Floyd and McNamara (2008) proposed that a critical period for the development of children's reading skills is during the third, fourth and fifth grade. That was because their reading content will be moved from narrative texts to informational texts which contain broader information, knowledge, structures as well as abstract and logical relations. If young students are not able to get involved with proper reading strategies to deal with reading texts, they would probably fail in interpreting the type of text as well as comprehending the key ideas of the text in the future. Consequently, the graphic organizer was used as the explicit reading tool

in the current study aiming to investigate the effectiveness in enhancing EFL young students' reading comprehension ability.

### **Objective**

The purposes of the current study were as follows:

- 1 To investigate the effects of using graphic organizers in teaching reading on elementary school students' English reading ability.
- 2 To explore students' opinions about using graphic organizers in teaching English reading.

### **Definitions of terms**

**1. Reading Comprehension Ability** refers to an ability to interpret meaning of a reading passage. Two levels of reading comprehension ability were assessed. First, literal comprehension is the ability to identify information included in the text explicitly. Secondly, reorganizational comprehension is the ability to combine details from various parts within the passage.

**2. Graphic Organizer** is a reading technique employed to help the reader in comprehending a text. In this study, five types of graphic organizers were studied including Timeline, Description, Compare-and-Contrast, Cause-and-Effect and Problem-and-Solution Organizers. Each organizer can be used with a particular type of reading passage which is represented by a specific key word.

### **Population and Participants**

The population of the current study was elementary school students in Thailand. A private elementary school in Bangkok was purposively selected because the school proposed the development of reading skills. The participants were then selected by the school administrators. Fifth grade students were chosen to participate in this study since they are in the "critical age" to learn reading strategies, (Chall, 1996; Best, Floyd and McNamara, 2008). In the selected class in the second semester of year 2013, there were thirty four students comprising of nineteen males and fifteen females.

### **Research Instrument**

Two main instruments were employed in the current study. Firstly, an instructional instrument used as the treatment was eleven lesson plans for English reading instruction using graphic organizers. Secondly, two research instruments used to evaluate the effects of the treatment were the English reading comprehension tests and the opinion questionnaire.

First of all, the lesson plan for the instructional instrument was designed based on the school curriculum aiming to measure grade-five students' reading literal and reorganizational comprehension levels. Regarding five graphic organizers proposed and the class time defined by the target school, the long-range lesson plan was drafted as 11-week instruction including 2-week assessment of the students' reading achievement. Unit one was designed to introduce all graphic organizers. Unit two to six were designed to instruct students how to use five graphic organizers with the correspondent text structure of reading passage. The instructional procedures of the English reading instruction using graphic organizers was developed based on the framework by Jiang and Grabe (2007). This

instruction was aimed to allow students to be able to identify the main idea and details of the text using graphic organizers as a reading tool. In addition, the lessons of the reading instruction were established the outcomes based on text structures and five graphic organizers as follows: identifying a person's schedule, listing information as pictures based on the main idea of the text, identifying the similarities and differences between two families' activities, identifying causes and effects from the passage and identifying the problems and solutions from the text. Ten relevant reading passages were compiled and two passages were used with each graphic organizer. These passages were initially measured the readability in order to examine whether they were appropriate with the level of the students using Dale-Chall readability online formula (1995). All lesson plans were validated as four aspects: learning outcomes, instructional materials, teacher's instruction as well as activities and time. According to the validation's results, the tasks in instructional materials should be revised to fit the class time.

Besides the lesson plans, two achievement English Reading Comprehension tests, were developed in forms of pretest and posttest which should be completed within 50-minute long. Since the current study employed one group pretest posttest quasi experimental research design, the pretest and posttest were constructed in the parallel format to ensure that the participants did not achieve high scores in the posttest because they remembered the pretest. To enhance the literal and reorganizational comprehension levels, comprehension question formats and the text structures based on the reading passages of the lesson plans were employed. The comprehension question forms were adapted based on Day (2005). To assess students' literal comprehension ability, the students were required to answer the questions by recalling the information explicitly showed in the text. On the contrary, students were assessed their reorganizational comprehension ability by combining information from the various parts mentioned to answer the questions. However, two out of five graphic organizers were employed in the pre and posttest based on the research study by Williams, Hall and Lauer (2004) and Beck, McKeown, Sinatra and Loxterman (1992). Each test comprised two passages and twenty question items. The first passage represented the timeline text structure and the second passage represented the problem-and-solution text structure.

To ensure the quality of two tests, the congruity of the test's content using Item-Objective Congruence Index (IOC), tests' reliability value and correlation were validated. The results showed that the parallel of two tests were good. The IOC values for content validity of two tests were acceptable. The reliability value of the pre and posttest using KR-20 formula was 0.611 and 0.622. The correlation of the both tests using Pearson Correlation was .896. The correlation result indicated that the parallel form of the both tests could be used interchangeable.

In addition, the opinion questionnaire was adapted from Jiang (2007). Two aspects were explored in the current study: The first aspect comprised 6 statements aiming to explore the general impressions about using graphic organizers during reading instruction. The second aspect comprised 7 statements requiring students to evaluate whether graphic organizers really helped them to see the text structures and comprehend the reading passages better. Then each item was measured whether it was congruent with objective using Item-Objective Congruence (IOC) Index of three-point Likert Scale. According to the validation, ten out of thirteen items was higher than 0.5 of IOC index. The quality of the

questionnaire was also assessed using Cronbach's alpha coefficient ( $\alpha$ ) formula by means of descriptive statistics. The reliability of the questionnaire was 0.752.

### Data Collection

The pretest and posttest were implemented to 34 participants in the first and the last week of the instructional period. Each test lasted for 50-minute class time and was collected the test scores in order to compare mean scores between two tests. Moreover the opinion questionnaire was distributed to the same group of participants in the last week. The participants were asked to return the completed questionnaire at the end of the last period of the instruction.

### Data Analysis

Data analysis for research question 1

Research question 1 was concerned about investigating the effectiveness of Graphic Organizers use in English reading instruction on the fifth grade students' reading ability. To analyze the data, the participants' mean scores from pretest and posttest were collected in order to examine the participants' reading achievement before and after the instruction using Graphic Organizers. The mean scores of both pretest and posttest were analyzed by a dependent t-test to investigate the different reading achievement level of the participants.

Data analysis for research question 2

Research question 2 was concerned about the participants' opinion of using Graphic organizers during reading instruction. To analyze the data, the participants' rating was calculated by arithmetic mean and standard deviation in form of descriptive statistics.

### Results

The findings are divided into two parts based on the research questions:

*Research Question 1:* To what extent does using graphic organizer in teaching English reading affect elementary school students' English reading ability?

The mean scores from the English reading comprehension pretest and posttest were compared using paired-sample t-test showed as following:

**Table 1**

***A Comparison of Students' Overall Mean Scores from the Reading Comprehension Pretest and Posttest and the Value of Effect Size in English Reading Instruction Using Graphic Organizers on Elementary School Students' Reading Comprehension Ability***

Assessment	$\bar{X}$	S.D.	Mean Difference	t.	df.	Sig.	d	(r)	Meaning
Pretest	10.44	3.23	1.382	5.456	33	.00*	<b>0.43</b>	0.21	Medium
Posttest	11.82	3.25							

\* $p < .05$  n = 34

The results in Table 1 showed that the students' posttest mean scores on the English reading comprehension test were significantly higher than the pretest mean scores at the significant level of  $p \leq 0.5$ . Additionally, the effect size (d) (Cohen; 1992, 1988) was .43 which was the medium value.

In conclusion, according to the research question number 1, English reading instruction using graphic organizers significantly affected grade five students' English reading comprehension ability. However, according to the effect size's value, it indicated that the English reading instruction using graphic organizers helped improve all grade five students' reading comprehension ability at a moderate level.

### Levels of Reading Comprehension Ability

Each test comprised 20 items including two different levels of reading comprehension. There were 14 literal questions and 6 reorganizational questions. To show the effectiveness of English reading teaching using graphic organizers elaborately on literal and reorganizational level of reading comprehension abilities, the results of the two levels of comprehension abilities were reported in Table 2.

**Table 2**

#### *A Comparison of Students' Mean Scores of Two Levels of Reading Comprehension Ability*

Comprehension Levels		$\bar{x}$	S.D.	Mean Difference	t.	df.	Sig.	d
Literal Ability:	Pretest	8.50	2.40	.824	3.865	33	.00*	0.36
	Posttest	9.32	2.21					
Reorganizational Ability:	Pretest	1.94	1.28	.559	2.493	33	.00*	0.39
	Posttest	2.50	1.52					

\* $p < .05$   $n = 34$

#### **Literal Comprehension Ability**

Literal questions were constructed as text-based items in order to require students to answer what was stated explicitly in the text. The students had to produce information from memory by using details from the text as well as to explicitly identify the relevant information included within the reading passages. The results were reported that the posttest mean scores on literal questions were significantly higher than the pretest mean scores. However, the effect size's value was small. It indicated that the English reading instruction using graphic organizers helped improve all grade five students' literal comprehension ability level at a small level.

#### **Reorganizational Comprehension Ability**

Reorganizational questions required students to use information from various parts within the text then put together and reorganize the information from the different parts in order to gain more comprehension. The results from Table 2 showed that the posttest mean scores on reorganizational questions were higher than the pretest mean scores. However, the effect size's value was small. It indicated that the English reading instruction using graphic organizers helped improve all grade five students' reorganizational comprehension ability level at a small level.

**Research Question 2:**

*Research Question 2:* What are students' opinions about using graphic organizers in teaching English reading?

The opinion questionnaire used thirteen closed-end question items in three-point Likert scales. The result of the opinion questionnaire was reported in Table 3 and 4.

*Table 3*

*The Results of the Opinion Questionnaire in the Aspect of the General Impression about Using Graphic Organizers in Reading Instruction*

Items	$\bar{x}$	S.D.
1. I think the graphic organizer activities are interesting.	2.68	.638
2. The graphic organizer activities are a good support to reading comprehension.	2.62	.652
3. I don't think the graphic organizer activities are useful.	2.68	.638
4. The graphic organizer activities can be very useful if the reading texts are difficult.	2.56	.660
5. I like the graphic organizer activities.	2.59	.657
6. I don't want to have more graphic organizer activities in the future.	2.71	.629
<b>Total Mean Score</b>	<b>2.64</b>	<b>.645</b>

Table 3 showed that the participants' general impression about using graphic organizers in English reading instruction was positive ( $\bar{x}$ =1.94, S.D.=1.28). From the results, item 1 and item 3 had the highest scores. This pointed out that students thought that the use of graphic organizers in English reading instruction was interesting. Even though the item 3 presented the negative view, the score was converted when interpreting the data.

Therefore, the students also thought that the use of graphic organize in English reading instruction was useful.

**Table 4**

*The Results of the Opinion Questionnaire in the Perception about Benefits of Using the Graphic Organizers for Helping Identify the Text Structures and Comprehend the Reading Texts Better*

Items	$\bar{X}$	S.D.
7. The graphic organizer activities did help me understand the texts better.	2.62	.697
8. I think I can remember the content of the text better after filling in the boxes.	2.53	.563
9. The graphic organizer activities did not help me see the organizations of the texts.	2.56	.746
10. I think I know what to look for in a text after using graphic organizers.	2.32	.638
11. The graphic organizer activities did not help me understand the main ideas of the texts.	2.56	.786
12. The graphic organizer activities helped me organizer the text's information better.	2.44	.613
13. The graphic organizer activities helped me see a coherent picture of a text rather than pieces of information.	2.62	.652
<b>Total Mean Score</b>	<b>2.5</b>	<b>.671</b>

In addition, regarding Table 4, the analysis of the second aspect illustrated the average overall mean score of the opinion at  $\bar{X}=2.5$ , S.D.= .671. This pointed out that almost of the participants perceived that using graphic organizers in English reading instruction really helps them see the text structures and comprehend the reading passages better. According to the results, items 7 and 13 showed the highest scores which indicated that the students perceive that the use of graphic organizers in English reading instruction could help them to comprehend the text better and see the sequence of the content. However, the item 10 showed the lower score. This implied that the students did not know what to look for in a text although they had learnt how to use graphic organizers as a reading tool. Therefore,

Hypothesis 2 “The students’ opinions about using graphic organizers in English reading instruction were shown positively.” was accepted.

## Discussion

### Improvement on Students’ Reading Comprehension Abilities

In the current study, the findings showed that the English reading instruction using graphic organizers enhanced the elementary school students’ comprehension abilities. This finding is consistent with several studies such as Fealy (2010), Grabe (2009), Halvorson (2010), Jiang and Grabe (2007), McKnight (2010), Russel (2010) and Willis (2008). Moreover, when analyzing the effects of the instruction on the two levels of comprehensions separately; the findings also showed that the instruments had an effect on both levels of comprehension.

One reason that could help explain why the reading comprehension was improved after the instruction might be the explicit instruction of the graphic organizers during the lessons. Newman (2007) argued that teaching graphic organizers explicitly can facilitate the students’ recall of the information read from the text. In the current study, after activating the students’ background knowledge and teaching new vocabulary related to the passage, the teacher explicitly introduced the graphic organizers, modeled how to use each of the organizers in reading, and provided the opportunity for the students to practice using the particular organizer. The students were also informed the benefits of each graphic organizer in the lesson. To ensure that the participants understood the use of the graphic organizer and would be able to use the organizer as a reading tool confidently further, they were provided a reading task that requires them to work in small groups and apply the tool when reading. With these explicit instruction and task requirements, the students might be able to comprehend the text better.

Moreover, another reason that may have helped improve the students’ comprehension ability might be the use of the discourse-structure awareness. Previous research studies showed the effectiveness of integrating discourse structure knowledge when teaching graphic organizers (Ghaith and Harkouss, 2003; Martinez, 2002). In the instruction of the current study, students were taught how to identify signal words in the text at the pre-reading step aiming to help the students to be able to analyze the text structure, so that they could choose an appropriate graphic organizer to help aid their reading. According to Grabe (2009), the information in each text is organized using some signal words. These signal words represent the structure of the text which can help suggest the choice of the graphic organizer as a reading tool. Koda (2005) also claimed that the students who can observe or identify the relevant signal words in the text can recall the content more easily, can identify the main ideas and supporting ideas, and understand how the content is organized in the text. By introducing the relationships between text structure and signal words, the students may be able to employ the right kind of graphic organizer and improve their reading comprehension better.

Even though the findings showed that the reading instruction using graphic organizers affected the students’ reading comprehension significantly, the effect size of the treatment was found to be at the medium level. This may due to the nature of the tasks employed in the lessons and in the tests. To practice how to use graphic organizers in each lesson, the students were asked to work in groups of four or five to perform a post-reading task together; whereas, in both the pre- and post-tests, they were required to work individually.

Consequently, the different requirements of the tasks during the lessons and the tests may have affected the impact of the treatment and yielded only medium level of the effect size.

### **Students' Opinions about Using Graphic Organizers in English Reading Instruction**

The findings revealed that the students had positive opinions about using graphic organizers in English reading instruction. The students commented that the graphic organizers helped them see the text structure and comprehend the passages better. The findings are consistent with the previous studies by McKnight (2010); Chang (2010); and Mayer and Poon (2001). According to the findings in the first research question, the students were found to comprehend the text better after receiving the reading instruction using graphic organizers. The success in performing the reading tasks may enhance their positive opinions about the instruction.

### **Limitation of the study**

Even though a number of studies have shown the effects of using graphic organizers in English reading instruction for young learners, some limitations should be considered based on the research instruments, the English reading comprehension tests.

The limitation related to the activities when learning and assessing. When learning how to use graphic organizers in English reading instruction, the participants were allowed to work in groups of three or four. They had the opportunity to discuss with their group member what graphic organizers should be used and which information should be filled in. However, when assessing at the end of the course, the participants were allowed to complete the posttest individually. This distinction of activities between learning and assessing might affect the effect size of the current study which was showed the medium effect size instead of high one.

### **Suggestions for the further study**

The current study aimed to present the exploration of instructional area for English reading as a foreign language. It established a reading instructional procedure to improve students' reading comprehension ability and their opinions. The findings from the study generated some recommendations for the further study as follows.

Firstly, it is recommended that a broader sample of students should be extended to investigate the better understanding of effectiveness of using graphic organizers in English reading instruction. It is also interesting to employ the same methodology in the other context. This may be conducted with the same or other participants.

Secondly, it is recommended that the qualitative instruments should be employed in the future studies for examples, interview, self-reporting as well as classroom observation. These instruments should be allowed a more in-depth study.

Finally, the graphic organizers might be employed with the existing content-area English textbooks provided by the school aiming to help higher-level students summarize the content easily.

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