CHAPTER I

INTRODUCTION

This part covers background of the study, problems of the study, objectives of the study, hypotheses, variables, significance of the study, limitation of the study, and definition of the key terms.

A. Background of the Study

ICT is a form of advanced science technology must be optimized function, especially in the implementation of EFL learning. ICT provides opportunities for students in the era of global competition needed to obtain adequate supplies. Through innovative ICT-based learning, teachers can provide vast opportunities for students to hone and promote competence on an international scale. Mastering current tick is necessity for every human being inedible age as well as in education, innovative learning, especially EFL learning can be done by using the Internet to generate device-based learning ICT.

The use of ICT in modern education is absolutely required. Integration of ICT in teaching and learning process is a topic of interest to many researchers, including education practitioners. Some experts and practitioners of education learning language in CALL, strongly supports the utilization of ICT in language learning to improve efficiency and effectiveness of learning that can improve the quality of understanding and mastery of the language studied. In other words, the integration of ICT in the field of language learning is inevitable known that the ICT and language learning are two aspects, which support each other like

two sides of the coin inseparable. ICT found to be advantageous in several ways: (1) technology facilitates exposure to authentic language; (2) technology provides the access to wider sources of information and varieties of language; (3) technology gives the opportunity to people to communicate with the world outside; (4) technology allows a learner – centered approach; (5) technology develops learner's autonomy. ICT help people in order to get information and to communicate each other in wider range.

ICT defined as technology, which the function is to support the process of conveying information and communication. The ways of conveying information does not have to be carried out directly between the communicator and the communicant. The development of ICT makes the process of communication between the communicator and the communicant can be conveys in easy ways. They can communicate through telephone, internet, e-mail, satellite, television, video conference and so on. The process of those communications applies in language learning. In language learning, there is a communication between teacher and student. The process of learning is not always carried out by subjecting teacher and students in the certain room or a certain place directly. As the example, teacher can use internet as the medium to give lessons, assignments, or other information to their students.

In context of language learning, ICT has an important role as the "media" bridging and enabling the learning process, or direct communication between students and teacher although they are not present in the same room or place in certain time. Language learning program can be created to enable students to learn

the lessons with guidance, instruction, information, or further explanation. ICT in language learning used as a reference book. Computer can store unlimited lessons or references, which can be accessed anytime, anywhere and accurately. Here, ICT can also be used in EFL writing class.

Writing is a series of related text-making activities: generating, arranging and developing ideas in sentences: drafting, shaping, rereading the text, editing, and revising.[1] Relevant to the above definition, Raimesstates that to produce a piece of good writing demands standard forms of grammar, syntax, and word choice. Besides, writing needs good mechanics, organization of paragraph, content, the writer's process and purpose.[2]Several skills that are needed for writing are getting the grammar right; having a range of vocabulary; punctuating meaningfully; using the convention in lay out correctly; and spelling accurately. In my opinion, writing a text-making activities covering: generating, arranging and developing ideas in sentences: drafting, shaping, and revising.

In the process of writing, there is a tool to help shape ideas that can be applied. It is called a graphic organizer. A Graphic Organizer (GO) is simply a graphical or spatial representation of text concepts. An instructional tool can help students to organize, structured the information and concepts to relate with the other concepts. In addition, the spatial arrangement of GOs allows the students to

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[1]Gould, E., DiYanni, R. & Smith, W. 1989. *The Act of Writing.* New York: Random House. Page x.

[2] Ann, Raimes. 1983. *Techniques in Teaching Writing*. Oxford: Oxford University Press. Page 6.

identify the missing information or absent connections in one's strategic thinking.[3]

Graphic organizeris a series of visual charts and tools used to represent and organize a student's knowledge or ideas. Graphic organizer is often used as part of the writing process to help students map out ideas, plots, character details and settings before beginning to write. Graphic organizer can be used to: sequence events, analyze cause and effect, compare and contrast and develop concepts in detail.Graphic organizer has many names including visual maps, mind mapping, and visual organizers. As an instructional tool, GOs used to illustrate students' prior knowledge about a topic or section of text that have been highly recommended to be used in classrooms. GOs are visual representations, models, or illustrations that depict relationships among the key concepts involved in a lesson, unit, or learning task based on Braselton & Decker concept while Meyen et al.stated that GOs are "visual displays teachers use to organize information in a manner that makes the information easier to understand and learn".[4]

The idea of GO is based on Ausebel'sassimilation theory of cognitive learning.[5] According to them, the information is organized by mind in a hierarchical top-down fashion. The cognitive approach to learning seeks to understand how incoming information is processed and structured into memory".Cognitive learning theory is that the memory system, with its short term

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[3]Ellis, E. 2004. *What's the big deal about GO?* Retrieved on January 23rd, 2010, from http://graphicorganizer.com. Page 3

[4] Meyen, E.L., Vergason, G. A. & Whelan, R. J. 1996. *Strategies for teaching exceptional children in inclusive settings.* Page 265

[5] Ausebel, D.P., Noval, J.D., & Hanesian, H. 1978. *Educational psychology: A cognitive view.* New York: Holt, Rinehart and Winston. Page 25-33

and long- term sorting and encoding components, guide the learning process. Learning is the best achieved when the information is presented systematically and stored in the student's brain in an organized, meaningful and useable manner.[6]

According to Novak,graphic organizeris used to represent children's conceptual understanding. One of the powerful uses of graphic organizer is not only as a learning tool but also as an evaluation tool, thus encouraging students to use meaningful-mode learning patterns. Perhaps by using graphic organizer in my classroom, my students' writing will significantly improve.[7]

In Cognitive Theories relating to Graphic Organizers, knowledge gained about how the brain processes information has instrumental in the development of teaching techniques and learning strategies. Several cognitive theories in particular lend support to the use of graphic organizers in helping students process and retain information. Schema theory, dual coding theory, and cognitive load theory provide the basis for explaining the characteristics of graphic organizers that support the learning process.

According to schema theory, memory is composed of a network of schemas. A schema is a knowledge structure that accompanies or facilitates a mental process. According to Winn and Snider, all of the definitions of schema theory contain the following characteristics:

1. A schema is an organized structure that exists in memory and combined with other schemas, contains the sum of an individual's knowledge.

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[6] McElroy, L. T., & Coughlin, C. N. 2009. The other side of the story: Using graphic organizer as cognitive learning tools to teach students to construct effective counter-analysis. *Unpublished thesis University of Baltimore Law Review*. p.76.

[7] Tracey Sharrock. 2008. *The Effect of Graphic organizer on Students' Writing. Graphic organizer And Students' Writing*. Action Research. July, 2008. Kennesaw State University. p.3.

2. Schema consists of nodes and links that describe relationships between node pairs.

3. Schema is formed through generalities, not specific information.

4. Schemas are dynamic. As new information is learned, it is assimilated into existing schemas or causes the formation of new schemas.

5. Schema provides contexts for how new experiences are interpreted. How information is interpreted is based on existing schemas.[8]

According to Dye, "the graphic organizer has its roots in schema theory".When students learn something new, they must be able to retain the information for later use. Ourknowledge is stored in a scaffold hierarchy as a way of organizing information.[9]Its mean information that fits into a student's existing schema is more easily understood learned andretained than information that does not. The teacher's task is to ensure that the student has prior knowledge related to the concept and to provide a means for helping the students make connections between prior knowledge and new concepts. Graphic organizers make it easier to link new information to existing knowledge and help students build the schema.Based on those explanations, it can be stated that Graphic organizer is a number of visual charts and used to represent and organize a student's knowledge and to represent their conceptual understanding. The theory underlining Graphic organizer is schema theory.

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[8] Winn, W., & Snyder, D. 1996. Cognitive perspectives in psychology. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology*. New York: Simon and Schuster MacMillan. P. 115-122

[9] Dye, G. A. (2000). Graphic organizers to the rescue! Helping students link and remember information. *Teaching Exceptional Childre*n, *32*(3), 72-76.

There are three compelling reasons why students should use ICT based graphic organizers in writing. First, students are considerably more likely to understand and remember the content subject you are teaching. Simply put, the information tends to be less "fuzzy" and more precise. Graphics help students separate what is important to know from what might be interesting, but not essential information. Second, because the semantic information processing demands are reduced, you can often address the content at more sophisticated or complex levels; this is especially true for many students with learning disabilities. Showing (as opposed to just telling) how the information is structured can be a powerful way to facilitate understanding. Third, students are more likely to become strategic learners. Reading and writing skills, communication skills, and analytical, critical, and creative thinking skills are all subject to improve when students learn recognize these patterns of thinking, construct, and use ICT based graphic organizers.

In addition, there are some reasons the researcher conducts the study on graphic organizer toward writing ability. First,graphic organizerhelps the students put things in sequential order. Second, graphic organizer provides structure, organization, format and a place for the students to relate information to their personal experiences. Such a procedure is invaluable to the reading and writing processes. Third, graphic organizeris a practical way to teach thinking and language development within the context of specific content course work. It allows a student to cover a topic in greater depth. During the writing process, the students must be able to state the topic and then support the topic with details.

These supporting ideas must also be in sequential order. Fourth, graphic organizer helps the students visualize the relationships between prior knowledge and the newly acquired knowledge. Graphic organizer is a tool that can guide the students through the four stages of the writing process.Fifth,The value of graphic organizer to teach essay writing cannot be underestimated. It is also worthwhile to point out that most students are visual learners. It allows students to see the logical flow of information before beginning to teach them to write. By requiring students to visually 'map' their brainstorming and pre-writing, they learn how good writers create effective texts.

Some problems in writing class that the researcher faces are that the students get difficulties in organizing ideas when they start writing comparison and contrast essay. They also get difficulties in comparing and contrasting ideas. They do not use transitional signal appropriately. In addition, they are still confused to generate ideas. For example, they do not know what to do in generating ideas. On the contrary, they are depended on dictionary and online references. Consequently, the students only translate from Indonesian into English using the dictionary. The result, their composition is sound Indonesian although it is written in English.

Due to the facts above, it motivates the researcher to conduct an experiment research entitled "The Effect of ICT Based Graphic Organizer toward the Students' Writing Ability at the Fourth Semester of the English Education Study Program at IAIN Palangka Raya"

B. The Problems of the Study

Based on the background of the study, the problems of the study are as follows:

1. Do the students taught using ICT Based graphic organizer get better achievement than those who taught without using ICT Based graphic organizerat the fourth semester English Study Program students of Palangka Raya State Islamic Institute 2015/2016 academic years?

2. In what ways, ICT Based graphic organizer gives contribution to students in the writing process at the fourth semester English Study Program students of Palangka Raya State Islamic Institute 2015/2016 academic years?

C. Objectives of the Study

The aims of the study are:

1. To measure whether the students who taught using ICT based graphic organizer get better achievement or not than those who taught without using ICT based graphic organizerat the fourth semester English Study Program students of Palangka Raya State Islamic Institute 2015/2016 academic years.

2. To find the area of contribution of ICT based graphic organizer to the students in the writing process at the fourth semester English Study Program students of Palangka Raya State Islamic Institute 2015/2016 academic years.

D. Hypotheses

The hypothesis of the study is formulated:

Ha : The students who taught using ICT based graphic organizer get better achievement than those who taught without using ICT based graphic

organizer at the fourth semester English Study Program students of Palangka Raya State Islamic Institute 2015/2016 academic years.

Ho : The students who taught using ICT based graphic organizer do not get better achievement than those who taught without ICT based using graphic organizer at the fourth semester English Study Program students of Palangka Raya State Islamic Institute 2015/2016 academic years.

E. Variables of the study

In the present study, there are two variables: one independent variable and one dependent variable. The independent variable is: ICT based graphic organizer. Meanwhile, the dependent variable is scores of the students' writing test.

F. Significance of the Study

This study is aimed at measuring whether the students who taught using ICT based graphic organizer get better achievement or not than those who taught without using ICT based graphic organizer at the fourth semester English Study Program students of Palangka Raya State Islamic Institute 2015/2016 academic years. This study has practical and theoretical significance. Practically, the result of this study is expected to give significant contribution to the English writing teachers. One of the significant is that ICT based graphic organizerare used as part of the writing process to help students map out ideas, plots, character details and settings before beginning to write that can be used by teachers as alternative techniques of prewriting strategies to be applied in writing classes. Moreover, the result of the study is expected to provide empirical data about writing using ICT

basedgraphic organizer. In addition, the study can also help the students to solve their problems in generating ideas when they are writing essay.

Theoretically, it is expected that the results of the study can give contribution to support the theory of cognitive processingthat underlining ICT based Graphic Organizer's theory on teaching English as a foreign language, especially for the writing class. Therefore, it is expected that writing is not only be seen as a product, but also more as a process.

G. Limitation of the Study

The study belongs to a quasi-experimental study by applying counterbalance procedure to collect the data.Here, the single group of the subjects are divided into two half that are called two treatment groups. The two half of students get treatment but the treatment is in different order: ICT based graphic organizer/ non- ICT based graphic organizer. This study is restricted to focus on measuring writing ability who taught using ICT based graphic organizer. The subjects of the study are the fourth semester English Education Study Program students of Palangka Raya State Islamic Institute 2015/2016 academic years. The study is limited on the use ofICT based graphic organizer in writing comparison and contrastessay. There are a number of reasons to limit on comparison and contrastessay writing. First, since the subject of the study is the fourth semester students in which they are, according to new English syllabus 2011 at English Education Study Program of State Islamic Institute of Palangka Raya, taking Writing III in this semester, the study enables to be conducted. Second, the course materials of Writing III covercomparison and contrast essays. The study is

conducted at the fourth semester English Education Study Program students of Palangka Raya State Islamic Institute 2015/ 2016 academic years. The number of the subjects of the study is about 21 students.

H. Assumption

The study is based on the assumption that the students who write an essay using ICT based graphic organizer will perform better than those who do not use it for a number of reasons. First, ICT based Graphic organizerhelp the students put things in sequential order. Second, ICT basedgraphic organizer provide structure, organization, format and a place for the student to relate information to their personal experiences. Third, ICT based Graphic organizeris a practical way to teach thinking and language development within the context of specific content course work. It allows a student to cover a topic in greater depth. During the writing process the students must be able to state the topic and then support his topic with details. Fourth, ICT basedGraphic organizer help the student visualize the relationships between prior knowledge and the newly acquired knowledge. Graphic organizer are tools that can guide the students through the four stages of the writing process. Fifth,the ICT basedgraphic organizer allow students to see the logical flow of information before beginning to teach them to write. By requiring students to visually 'map' their brainstorming and pre-writing, they learn how good writers craft effective texts.

I. Definition of Key Terms

The following are some definitions of important terms that are used in this study:

a. *An effect* is a difference between or among population means. Effect size is a standard score that represents the strength of a treatment in an experiment.[10]In the present study, ICT based graphic organizer is said to have effects on writing if the qualities of the writing using ICT based graphic organizer are different from the qualities of the writing without using ICT based graphic organizer. The differences between the two compositions are the result of using ICT based graphic organizer. On the other hand, ICT based graphic organizer is said to have no effects on writing if the qualities of the writing using ICT based graphic organizer are the same or almost the same as the qualities of the writing without using ICT based graphic organizer.

b. *Comparison and contrast essay*is a type of expository essay that notes similarities and differences between two or more things. The two types of organization for comparison and contrast essays are point-by-point and block pattern.[11]In the present study, comparison and contrast essays refer to the material taught by the writing lecturer including definition, transitional used, and organizational pattern of comparison and contrast essays.

c. *Essay* is a group of paragraphs that develops one central idea.[12] In the present study, essay refers to comparison and contrast model of comparison and contrast essay.

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[10] Edward L. Vockell & J. William Asher. *Educational Research.Second Edition*.(New Jersey: Merril of Prentice Hall, Inc. 1983) p. 475.

[11]Sabarun. 2003. Fundamental of Writing. Unpublished Malang: Universitas Muhammadiyah Malang. , 2003: 131.

[12] Regina L. Smalley, et.al.2001. *Refining Composition Skills: Rhetoric and Grammar (fifth edition).* Boston: Heinle& Heinle Publishers. P.105.

d. *ICT based Graphic organizer*is a computerized visual charts and tools used to represent and organize a student's knowledge or ideas. ICT stands for information and communication technologies and are defined as a diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information.[13] In the present study, ICT based graphic organizer refers to the technology provides graphic organizers for comparison and contrast essay writing adapted from worksheet works.com. http://www.worksheetworks.com/miscellanea/graphic-organizers.html

e. *Prewriting* is the earlier stage in writing process in which a writer determines the topic, collecting materials, organizing materials, planning and outlining. In the present study, prewriting refers to the strategy used by the students in writing comparison and contrast essay.

f. *WritingAbility*is the skill to makes a series of related text-making activities: generating, arranging and developing ideas in sentences: drafting, shaping, rereading the text, editing, and revising. [14] In the present study, writing ability refers to the students' ability in writingcomparison and contrast essays.

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[13] Wikibook. 2015. Online URL: https://en.wikibooks.org/wiki/ICT_in_ Education/ Definition _of_Terms. This page was last modified on 19 October 2015, at 13:58, accessed on November, 12, 2015.

[14]Gould, E., DiYanni, R. & Smith, W. 1989. *The Act of Writing.* New York: Random House. p.x.