THE EFFECT OF USING GRAPHIC ORGANIZER TO STUDENTS’ WRITING ABILITY

Kiki Juniarti  
University of Bengkulu  
kikijuniarti17@gmail.com

Dedi Sofyan  
University of Bengkulu  
dedisofyan73@gmail.com

Kasmaini  
University of Bengkulu  
kasmaini72@yahoo.com

ABSTRACT
This study aimed at investigating the effect of using Graphic Organizer to students’ writing ability. This research was designed as a quasi-experimental research. The population of this research were all eleventh grade students at SMA N 1 Bengkulu Utara. The sample of this research was chosen by purposive sampling technique, so there were two science classes which consist of 52 students as the sample. Pre-test and post-test were involved as the instrument of this research. The first group was as experimental group taught by graphic organizer technique and the second group was as control group taught by conventional technique. The pre test was given to both experimental and control groups at the beginning, treatments were given in six meetings, and post test given at the end of the term. The data were analyzed by using t-test formula. From the calculation, the researcher found that the t-test value was 5.00, the degree of freedom value was 50, and the t-table was 3.49. Since t-test was higher than t-table (5.00 > 3.49), it meant that alternative hypothesis (H₁) was accepted. Thus, it could be concluded that the use of graphic organizer was effective to students’ writing ability in term of content, organization, and language use.

Keywords: Graphic Organizer, Writing Ability

ABSTRAK
Penelitian ini bertujuan untuk meneliti pengaruh dari penggunaan Organizer Grafis terhadap kemampuan menulis siswa. Populasi penelitian ini adalah seluruh siswa kelas sebelas di SMA N 1 Bengkulu Utara. Sampel dalam penelitian ini diperoleh dengan menggunakan teknik sampel berdasarkan tujuan, sehingga terdapat dua kelas IPA yang berjumlah 52 siswa sebagai sampel. Pre-test dan post-test digunakan sebagai instrumen dari penelitian ini. Kelompok pertama dalam penelitian ini dijadikan sebagai kelompok eksperimen yang diajar menggunakan teknik organizer grafis dan kelompok kedua dijadikan sebagai kelompok kontrol yang diajar menggunakan teknik biasa. Pre-test diberikan kepada kedua kelompok baik eksperimen maupun kontrol diawal pertemuan, perlakuan yang diberikan sebanyak enam kali, dan post-test yang diberikan diakhir proses penelitian. Data hasil penelitian dianalisa dengan menggunakan rumus t-test. Dari perhitungan tersebut, peneliti memperoleh bahwa nilai t-test adalah 5.00, derajat kebebasan 50, dan nilai tabel distribusi 3.49. Karena hasil t-test lebih tinggi dari tingkat t-table (5.00 > 3.49), maka hipotesis alternatif (H₁) diterima. Oleh karena itu, dapat disimpulkan bahwa penggunaan Organizer Grafis mempengaruhi kemampuan menulis siswa dalam segi isi, organisasi, dan penggunaan bahasa.

Kata kunci: Organizer Grafis, Kemampuan Menulis
INTRODUCTION

One of the important skills in English beside listening, speaking, and reading is writing. Students should master writing skill if they want to be successful in education, because it has important role not only in conveying information, but also in expressing their thoughts or ideas. According to Cohen and Reil (1989), writing is a communicative act, a way of sharing observation, information, thoughts, or ideas with ourselves and others. It means that by writing students can share their thoughts, ideas, and information to the others.

However, writing is a productive skill which is difficult to be mastered. Unzueta (2009) points out that “Students have limited writing abilities and lacked of knowledge to write compositions that convey their thoughts and ideas”. It can be seen from the results of writing tasks of the most Indonesian students which were still far from the expected goals in teaching (Hestri, 2013).

Teaching writing in Indonesia still uses traditional ways. Some teachers still asked the students to memorize tenses, grammar, and generic structure of a text (Winda, 2014). After memorizing, the teachers asked the students to write a short paragraph of the text. If the students do not have enough time to write it at the school, the teachers would ask them to continue the test at home as homework. The same phenomena often occur in SMA N 1 Argamakmur. By applying the same procedures, a teacher hopes that the students will get good scores of their writing tasks, but in fact the students’ score were still far from the expected goals. This might happen because the students do not understand how to convey their thoughts and ideas in the text.

To overcome the difficulties in teaching writing, teacher can apply some techniques for writing, for example: free writing, stop and dare, four square, picture series, picture animations, graphic organizers, and so on. Some of those techniques have ever been studied in Indonesia. A study by Juitania (2013) investigated the effect of using Four Square writing methods on students’ writing skill for grade eleven of SMA PLUS PGRI Cibinong. The result of this study showed that the technique was effective to improve the students’ writing skill of analytical exposition text in term of content, vocabulary, and language use.

Kurniawan (2014) investigated the effect of using stop and dare strategy in teaching writing hortatory exposition for Senior High School students in Padang. The results of the study indicate that the strategy was an effective way in teaching writing and helps the students to develop hortatory text in a good sequence.

The effect of using graphic organizers on students’ writing ability had also been observed by Tayib (2015). The results of this study proved that the graphic organizers model was useful to increase the students’ writing ability and had positive impacts on their attitudes toward this skill. The results suggest that graphic organizer can be an effective support in teaching writing for learners of English as a foreign language.

Graphic organizer is believed to be an appropriate technique which consists of various patterns that can help the students to organize their ideas in writing. The students can choose among the various patterns which suitable to comprehend the text. Some studies over the world, such as Brown (2011), Dewi (2013), Juitania (2013), Febridayani (2013), Lanchaster (2013), Noviansari (2014), and Febrianza (2014) state that by using graphic organizer, the students can convey their thoughts and ideas in the correct sequential order. They can develop their thoughts and ideas by guidance of the technique. In general, there are some types of graphic organizer, namely: network tree, spider map, cycle map, fishbone, cloud/cluster, clock, venn diagram, star, vocabulary map, and pie chart.

Miller (2011) states that graphic organizer is served as visual display of ideas that help learners to organize their thoughts and apply
their thinking skills to the content in a more orderly manner. Miller further adds that graphic organizers "often occur in the form of key words and allow students to be more focus on the meaning rather than the format of complete sentence structure". The students can be more focus on the meaning of the key words rather than on the form of the graphic that they used. It means that whatever the graphic that is used by the students, they understand about the key words’ meaning which they put on the graphic.

According to Kajder (2005), graphic organizer (GO) can help the students to understand and analyze the content of the text based on the appropriate steps. The organizers can help the students to identify the main idea and to support the details of a text, for example hortatory exposition text. However, the researcher has not found yet a study about the use of graphic organizer in teaching writing hortatory text in Indonesia. Therefore, the researcher tries to conduct this research to find out whether this technique will give effect or not in students writing hortatory text.

In addition, there are some advantages of using graphic organizer. Ellis (2004) argues that there are three benefits that students can get from graphic organizer. First, graphic organizer can help students to separate what is important to know from what might be interesting, but not essential information. Second, students can address the content at more sophisticated or complex level. Third, students are more likely to be strategic learners. Writing is an alternative way to compose our thoughts and ideas in written form. It is a complex skill because it has some requirements that will produce a good paragraph through thinking and organizing. Boardman (2002) who says that writing is a continuous process of thinking and organizing, re-thinking, and re-organizing. Those processes can help a writer to produce the good paragraph.

Due to the fact that writing is an important skill which is difficult to be mastered, this study has been conducted as an experimental study of students’ writing ability by giving some treatments used graphic organizer technique for experimental students. Furthermore, the choosing of the sample of the students was by consideration that they have some problems in writing skill. So that grade XI IPA 1 and XI IPA 5 students were considered as appropriate sample for this study entitled “The Effect of Using Graphic Organizer to Students’ Writing Ability”. At the end, this study arrived into the aim of explaining results which answer the research questions which were laid in this study about whether any effect or not by using graphic organizer technique in writing skill.

METHOD

The method which used in this study was quasi-experimental design which meant that there was a condition could not fulfil in doing the true experiment. Quasi-experiment includes assignment, but not random assignment of participants to groups (Creswell, 2002). This study fulfilled one condition which was there were two groups, namely: experimental and control groups (Griffee, 2012). The experimental group taught by applying graphic organizer technique and the control group taught by applying conventional technique. In addition, this study applied pre- and post- test approach in this design in order to know whether there was any effect of this study or not.

<table>
<thead>
<tr>
<th>Select Group</th>
<th>Control Group Pretest</th>
<th>No Treatment Postest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>Pretest</td>
<td>Experimental Treatment</td>
</tr>
</tbody>
</table>

The population of this research was all members of grade eleven students in SMA N 1 Bengkulu Utara. There were 10 classes of eleventh grade which was divided into 3 programs; they were 6 science classes, 3 social classes, and 1 language class. The overall population was about 239 students. By
conducted using purposive sampling technique, 2 classes of eleventh grade students were chosen as the sample of this study. The sample was chosen using purposive sampling technique because it was chosen based on particular consideration (Sugiyono, 2011). It was shown by the result of a simple writing test which was given in the previous observation. The result showed that almost students' scores of those classes were far from the standard score (75). Further, an English teacher of SMA N 1 Bengkulu Utara also recommended for taking those classes as the sample. Therefore, grade XI IPA 1 was chosen as experimental group and grade XI IPA 5 was chosen as control group.

The instrument for collecting the data in this study used a writing test as the main instrument. The tests were provided into two categories, pre-test and post-test. The test consisted of directions, three topics and information on how the students' writing are assessed. From those topics, the students chose one topic which interested for them. The topics that were given by the researcher were some topics which relate with students' real life. To check validity and reliability, the instrument was validated the content of the test to the expert judgement then tried out to 20 students who have same characteristics with the sample of study. They were grade XI IPA 2 students who also have difficulties in writing skill. The result of try out was analyzed through the Statstical Package for Social Science (SPSS. 21), in order to know the reliability of the test. The result showed that the instrument had high reliability in which the value of Cronbach Alfa was more than 0.8.

This study used an analytical scoring rubric for scoring. The components in the writing text could be scored separately by using this rubric, such as Content, Organization, Vocabulary, Language Use, and Mechanics (Weigle, 2009). Because this study focused on the graphic organizer usage to help students in delivering their ideas through written, thus this study only focused on three elements. They were organization, content, and language use. Further, the scores started from 1 to 4 scales. Then the students' writing score would be calculated by using this following formula:

\[ N = (S \times 8) + 4 \]

Where:
- \( N \): students' writing score
- \( S \): students' writing score in analytical scoring

There were three procedures of conducting this research: pre-test, treatment, and post-test. A pre-test was given to the experimental and control groups before the treatment in order to know the capability of those groups. The treatments were conducted by applying graphic organizer technique in experimental group, while conventional technique for control group. The post-test was given to both groups after the treatments were completed, in order to know whether any improvement of students' ability in writing skill or not.

The data were analyzed using T-Test formula. It was used in order to know the significance results between experimental and control groups. The formula was shown as follows:

\[ t = \frac{M_x - M_y}{\sqrt{\frac{d_{x}^{2} + d_{y}^{2}}{(N_x + N_y) - 2} \left(\frac{1}{N_x} + \frac{1}{N_y}\right)}} \]

where:
- \( M_x \): the mean of experimental group
- \( M_y \): the mean of control group
- \( d_{x}^{2} \): standard deviation of experimental group
- \( d_{y}^{2} \): standard deviation of control group
- \( N_x \): the total number of experimental group
- \( N_y \): the total number of control group
RESULTS AND DISCUSSION

The pre-test scores of experimental and control groups were calculated by two raters using manual calculation. The pre-test result of those groups could be seen in the table 2 below.

<table>
<thead>
<tr>
<th>No</th>
<th>Aspect</th>
<th>The mean score of experimental group</th>
<th>The mean score of control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The three aspects of organization, content, and language use</td>
<td>62.33</td>
<td>62.57</td>
</tr>
<tr>
<td>2</td>
<td>Organization</td>
<td>55.21</td>
<td>53.57</td>
</tr>
<tr>
<td>3</td>
<td>Content</td>
<td>68.75</td>
<td>67.86</td>
</tr>
<tr>
<td>4</td>
<td>Language Use</td>
<td>59.89</td>
<td>54.02</td>
</tr>
</tbody>
</table>

Based on the table above, the different result of the whole aspect could be seen clearly in the following diagram.

The table and the diagram above showed that the mean scores between those groups were slightly different. The mean score of experimental group was 62.33 while control group was 62.57. It meant that those groups had similar abilities and background knowledge in writing text. It also indicated that their ability in writing before treatment were far away from the score of minimum standard.

In addition, for the result of mean score of each aspect, such as organization, content, and language use also showed slightly different scores (see diagram 4.2). In the pre-test of the experimental group, it was found that the mean score of organization was 68.75 while the control group was 67.86, the mean score of content was 55.21 while the control group was 53.57, and the mean score of language use was 59.89 while the control group was 54.02. It showed that the mean scores of each aspect were slightly different between experimental and control groups.

The result of post-test of those groups showed different results. The post-test result could be seen in the table 3 below.

<table>
<thead>
<tr>
<th>No</th>
<th>Aspect</th>
<th>The mean score of experimental group</th>
<th>The mean score of control group</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The three aspects of organization, content, and language use</td>
<td>82.00</td>
<td>63.71</td>
</tr>
<tr>
<td>2</td>
<td>Organization</td>
<td>89.58</td>
<td>67.41</td>
</tr>
<tr>
<td>3</td>
<td>Content</td>
<td>76.87</td>
<td>66.96</td>
</tr>
<tr>
<td>4</td>
<td>Language Use</td>
<td>73.44</td>
<td>51.34</td>
</tr>
</tbody>
</table>

The result in the table would be presented in the diagram 3 below to see the different results clearly.
The table above revealed that the results of post-test both experimental group and control group increase. After giving the treatment to the experimental students, their mean score of the post-test increased into 82. On the other hand, after the control students were attending conventional meetings, their mean score of post-test slightly increase into 63.71. It meant that the students who taught by using graphic organizer could improve their writing abilities than students who taught by using conventional technique. It also indicated that the experimental students’ ability in writing after treatment were passed the score of minimum standard.

Furthermore, the result of each aspect such as organization, content, and language use also showed the different results (see diagram 4.4). In this post-test of the experimental group, it was found that the mean score of organization was 89.58 while the control group was 67.41, the mean score of content was 76.87 while the control group was 66.96, and the mean score of language use was 73.44 while the control group was 51.34. From the results, the mean score of each aspect of the experimental group showed that the students’ ability in writing text were improved and increased, while the other group still showed slightly improvement.

From t-test calculation, the researcher found that the result of T-count was 5.00 while the degree of freedom was 50. Based on statistic table, T-table of 50 was 3.49. It showed that t-count was higher than t-table (5.00 > 3.49). It meant that $H_1$ was accepted and $H_0$ was rejected. In other word, there was a significant effect of using graphic organizer on students’ writing ability. It could be concluded that Graphic Organizer technique can enhance the students’ ability in writing.

Discussions

Organization
Before the graphic organizer was conducted to the experimental students, they were not able to develop the text into complete organization which included a thesis, two arguments, and a conclusion (editorial/recommendation/reiteration). Almost of students developed their text into three parts, such as a thesis, an argument, and a conclusion, or there were no thesis and conclusion. Some of them also confused how to differentiate which text that used editorial, recommendation, or reiteration.

Meanwhile, after the students conducting the technique, the students were able to organize the text. It was supported by a theory of Egan (1999) which stated that the students can share their information and ideas into labels’ pattern of graphic organizer and arrange it orderly. They could easily divide the generic structure by using graphic organizer. They could differentiate which text used editorial,
recommendation, or reiteration clearly. In addition, they could put the main topic on the trunk and put their arguments by using key words on the branches of network tree graphic.

On the other hand, the control group gave different results. By using conventional technique, the students were still difficult to develop a text. Most of them were not able to write a good thesis and put their ideas unclearly. They developed their text into three paragraphs, a thesis, an argument, and a conclusion, or there were two arguments and a conclusion only. It indicated that the students who taught by conventional technique were not able to organize their text in complete organization.

Content
The previous pre-test results showed that the content of experimental group still low. They were not able to put appropriate ideas to the topic. Almost of them wrote the content which contrasted to the title of the text. It could be seen from the thesis statement which is not suitable to the topic. Furthermore, after applying the graphic organizer technique, the students knew what ideas which they wanted to write.

By using network tree and spider map, the students were helped to put their ideas which appropriate to the topic. It was proved by a theory of Fisher & Schumaker (1995) which state that graphic organizers are visual displays of key content information which can help the students to visualize how the content are organized. The technique made the content of students’ writing was better than before. In addition, a theory of Miller (2011) and Kajder (2005) also proved that the graphic organizer served as visual display of ideas that can help students to organize and analyze the content of the text in orderly manner based on appropriate steps. It revealed that the technique could help the students to ease themselves to convey their thoughts and ideas in the correct sequential order.

In contrast, the control group results showed that there was no improvement of the students writing in term of content. By using conventional technique, they were still difficult to put their ideas which appropriate to the topic. Almost of them were not able to list their content on the paper. It showed that the students who taught by conventional technique could not write a good content in a writing text.

Language Use
Before the treatment was conducted in experimental group, the students wrote anything arguments for their text unclearly. They did not mention their arguments by using sequential words. In addition, there were no supporting details which mentioned by argument words (for example, for instance, a study of, etc) to support their arguments. However, after the researcher gave the treatment, the students were able to use various language uses in their writing text. It was stated by Rajan (2013) that students can identify the relationship of the paragraphs of a text by using appropriate language use through graphic organizer. The students were able to used argument words to mention how many their paragraphs and added supporting details by using argument words to support their argument.

Further, the students in control group were not able to use various sequential words and they not added supporting details in their arguments. In addition, the students translated their sentences from Bahasa to English for each word. Thus, the sentences became uncontrolled. It revealed that the students who taught by using conventional technique could not improve their writing ability as good as the students who taught by using graphic organizer.
The Effectiveness of Graphic Organizer

Based on the explanation above, graphic organizer had a positive effect to students writing ability at SMA N 1 Bengkulu Utara. It could be seen from the students’ writing improvement in term of organization, content, and language use.

The result also proved that this technique was appropriate in improving students’ writing ability as same as Juitania’s study (2013) namely Four Square Method which had been mentioned in the previous study. It was different with this study which used two kinds of graphic organizer, namely: Network Tree and Spider Map while Juitania’s study used four squares only. Based on the implementation of Network Tree and Spider Map in the experimental group, the students were freely to add their ideas into the diagram since the pattern of the graphic was not rigid form. In contrast, the method of Four Square technique prohibits the students to add more ideas since the graphic only provides four ideas only. Furthermore, the study had same result where the graphic organizer gave a positive effect on students’ writing ability.

The result of this study also was in accordance with the result of Tayib’s study (2013). Although, in Tayib’s study graphic organizer was implemented for college students, while this study was implemented for senior high school, it showed that graphic organizer could be applied in different level of students. The effectiveness of using graphic organizer to students’ writing ability for different level of students could be explained by analyzing some factors. It may be caused by the students’ interest in writing by implementing the technique. They felt that it was interesting activity since they could create their graphic by using power point or mind-mapper application in writing their ideas. Thus, the students could easier to organize the sentences and arrange the paragraph in the graphic that had been provided in their paper. Another factor was probably because graphic organizer was a new technique which could help them to overcome their difficulties in writing. It was considered as a helpful technique since it allowed the students to arrange essential aspects of an idea or topic into a pattern using labels (Egan, 1999).

The result of this study also proved a theory of Ellis (2004), which mentioned that there were some benefits which students could get from graphic organizer. First, students could separate the important things which were necessary to know for other people based on certain topics. For example, they could separate some important information into three parts: thesis, arguments, and reiteration/recommendation/editorial which really related to the real issue. Second, students could address the content at more sophisticated way. It could be seen from the ability of students in using power point to create their graphic. Third, students were more likely to be strategic learners. It could be seen from their motivation in learning English, especially in writing. They were able to solve difficulties in writing without any tackles.

CONCLUSIONS AND SUGGESTIONS

Conclusions

Referring to the discussions of the research, it can be concluded that:

1. Teaching writing through graphic organizer had a positive effect to students’ writing ability to write a text. It could be seen from the result of t-count which is higher than the t-table. Thus, alternative hypothesis (H₁) was accepted.

2. The students who were taught by graphic organizer could improve their writing ability by passing the score of minimum standard than the students who were taught by the conventional technique.

3. Graphic organizer technique had been successfully implemented as an effective technique to improve the students’ writing ability. It could affect students’ writing skill in
term of organization, content, and language use.

**Suggestions**
Based on the result of this research, some suggestions are proposed as follow:

1. **For Writers**
   The writers can use this study as beneficial information as a reference to support them in order to overcome their difficulties in doing the same research, especially in writing skill.

2. **For English teachers/lecturers**
   The teachers/lecturers can apply this technique to help the students to improve their writing ability especially in writing skill. In addition, other techniques also can be applied to help the students to improve their ability in learning English, not only for writing skill but also for other skills.

3. **For students**
   The students can use graphic organizer technique individually to improve their writing ability in other kinds of text. They can also organize their daily activities by using this technique.

4. **For further research**
   The result of this research can give contribution as a reference for further researchers in doing research on other techniques for writing improvement.

**REFERENCES**


Brown, M. (2011). Effects of graphic organizers on students’ achievement in writing process. Online submission to ERIC.


Febrianza, Eka Fiddo. (2014). *The Use of Graphic Organizer to Improve the Eight Years Students’ Ability in Reading A Descriptive Text at MTs Assyafi’iyah Gondang in Academic Year 2013/2014*.


Juitania. (2013). The Effect of Using Four Square Writing Method on Students’ Writing Skill. UNPAK.


