

The Effect of Graphic Organizers on ELT Students' Writing Quality

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Abstract:

Graphic organizers are used in ELT classroom to help the students learn better. It refers to the way the students use graphic organizers in writing. The purpose of this study is to investigate the effect of graphic organizers on ELT students' writing quality. This study was a quasi-experimental research design. The experimental group was taught by using graphic organizers. The control group was administered by using conventional strategy. The participants of the research were the second semester students of English Department, in one of the private universities in Madiun. The data were analyzed by utilizing independent t-test and one-way ANOVA based on the level of significance at .05. The result of the study shows that there is a significant difference between the mean scores of the students in the experimental and control groups. The students who are taught by using graphic organizers are better than the students who are taught using conventional strategy. The students in the experimental group perform better on writing quality in terms of content, vocabulary, and mechanics than those who do in the control group. It can be concluded that graphic organizers have a significant effect on ELT students' writing quality. It is effective to be used in order to help the students write better. The students are successful in

generating the ideas of writing and it can create a social community. We recommend for the future researchers to realize other various graphic organizer models into research.

Keywords: *descriptive paragraph, graphic organizers, paragraph writing, writing quality*

1. INTRODUCTION

For college or university students, writing becomes the most challenging skill, since the students have made a research report as one of requirements to pass their study. Writing needs some processes that are not instantly learnt for a night. There should be some practices done in an attempt to master the skill. The students are asked to arrange the ideas into paragraph or essay clearly. It is the process to gather the ideas, manage the ideas into well organization and express it into sentences, paragraph, or essay. It should be in well organization to make the readers understand the information. It needs a process to produce the product. Many previous studies on writing conducted to figure out the writing problems. A study conducted by Reza & Biria (2013) mentions the students should have better time management to perform their writing activity to achieve better writing quality. It provides the students with more opportunities to engage with one another to share ideas in writing (Styati & Latief, 2018). Another study is also conducted by Zabihi & Rezazadeh (2013) that examine the L2 students' creativity on narrative writing performance compare with the social cultural. Moreover, the study in writing is also conducted by Styati (2016) the using YouTube videos and picture series in writing performance. The result shows that using picture series is effective than using YouTube videos to help the students in writing.

There are many discrepancies on writing to be solved. Robinson, et al. (2006) have mentioned that many more online learning activities are needed regarding their potential for assisting students by using graphic organizers in both learning content and learning to learn. Writing is a complex process and needs more than one step. It means that when the students for the first time write in English, the students should have already been thinking about what they are going to express and how they are going to write it. After finishing writing, they read over what they have written and make changes and corrections. It is considered as the difficult activity in writing. To solve the problem in EFL classroom graphic organizers are used in figuring out the problem in writing.

Graphic organizers are the concept of mapping used by the students to organize the ideas on better writing. Many studies on graphic organizers are conducted by many researchers (Robinson, 2015; Khalaji, 2016; Stull & Mayer, 2007; Unzueta, 2009; Rahmat, 2020; and Odegaard, 2015). The results show that the students are motivated and preferred working with the various strategies since they are more interesting and up to date than the textbooks. It can be used in writing classroom (Capretz, et al., 2003;

Meyer, 2003; Anderson, et al., 2018; Lee & Tan, 2010; Elhawwa, 2015; Vitanofa & Anwar, 2017; Anggraeni & Pentury, 2018; and Maharani, 2018). The characteristics of visual authentic tools used in writing class are interesting and easy in helping the students. It is to facilitate the discussions about different strategy, helping students become critical rather than passive students. It is to elicit meaningful written communication.

Furthermore, it is needed to investigate the effectiveness of graphic organizers on ELT students' writing quality. The organizers are used to teach writing as the medium in teaching learning process. Thus, this study has the purposes to answer the questions:

- (1) Do the students who are treated using graphic organizers have better writing quality than the students who are employed using conventional teaching?
- (2) Which aspects of writing do the students perform better in writing descriptive paragraph?

2. LITERATURE REVIEW

English writing has an important role for the students of English department. The students must have good skill on it. There are many studies pertaining on writing which are conducted by many researchers. A study by Dobao (2015) has reported that collaborative writing and individually writing. Another study is conducted by Shehadeh & Shehadeh (2016) that mention the use of collaborative writing. The result shows that collaborative writing can develop better writing on content, organization, and vocabulary. Then, Widodo (2013) mentions that collaborative writing is helping the students to compose writing well. The teacher can engage the students to blend the collaborative writing activities. Moreover, Styati (2016) has studied that using YouTube and picture series can be used in teaching writing. Using pictures series are effective in helping the students composing writing. Furthermore, Styati & Latief (2018) have studied on writing using pair work. The result shows that the dominant-dominant students on pair work have better writing performance than that dominant-passive students. Thus, many of the studies concern on writing problem and still being further investigated for other researcher to solve the problem.

Teaching writing using graphic organizers can also be known effective in helping the students to write better. It is assumed that the students feel easy in composing writing. It can be used in teaching descriptive writing (Pratama, et al., 2017), persuasive writing (Gonzalez-Ledo, et al., 2015), argumentative writing (Anderson, et al., 2018) and recount text writing (Maharani, 2018). Graphic organizers can help the students to write better and improve the students' writing because the students understand the instruction well (Maharani, 2018; Vitanofa & Anwar, 2017). Furthermore, graphic organizers can help the students in composing many kinds of writing text.

Graphic organizers can be used to encourage the students to be more creative to develop the ideas in writing. The students can write better by using many kinds of graphic organizers so the students can develop their ideas well. The students develop their writing by implementing thematic map, network tree, spider man and etcetera.

The students can also learn how to write collocation easily (Anggraeni & Pentury, 2018). It can also improve the organization of the writing (Gonzalez-Ledo, et al., 2015). Furthermore, graphic organizers help the students to have better understanding in developing writing.

Graphic organizers can help the students to develop their critical thinking. Critical thinking means that the students can determine whether their ideas can be developed well or not. The students understand how they choose the suitable words in accordance to the context of environment (Rahmat, 2020). It can be elaborated in box of the graphic organizers. Moreover, it is effective tool to generate sentences containing completely structure of syntax and discourse.

To sum up, the use of graphic organizers are effective to help the students to write better. It encourages the students to compose better writing because they can manage the ideas well. It also can encourage the students to develop their critical thinking because they have clear idea on how to develop better writing quality. Thus, graphic organizers are effective tool in helping the students to finish their work on writing so that they have better writing quality.

3. RESEARCH METHODOLOGY

This section describes the research design, participants of the study, instrument, and data analysis. The following is elaborated in detail.

3.1 Population and Sample

The population of the research were the second term students of English Department, Universitas PGRI Madiun. There were four classes (2A, 2B, 2C, and 2D) in the second term and the sample were 2A and 2C class. Each of the class consists of thirty students. This research used random sampling techniques to choose the sample. For this semester, the students were given the paragraph writing. They were asked to write many kinds of paragraphs. There were thirty participants involved in this study. They were chosen because they have finished completely the grammar class in the previous semester. In the experimental group, the students were assigned to write a paragraph by using graphic organizers. The students in the control group were assigned to write by using the conventional strategy. Furthermore, the students were given posttest to write descriptive paragraph.

3.2 Instruments

Test was used as the research instrument to collect the data. It was the writing test which was validated by the experts. The writing test was also tried out first before it was used for the pretest and posttest. The experts were the English lecturers of the English department of Universitas PGRI Madiun. There were two experts which have the same educational background. The two experts have a ten-year experience in writing class. After giving treatment, we gave posttest. The posttest was determine as the main data in this research.

The criteria used to assess paragraph were divided into content, organization, grammar, vocabulary, and mechanics (Styati & Latief, 2018). The content was used to see whether the students were on the right track according to the topic. The organization was explored in terms of the basic format of paragraph writing. It contains the topic or one idea, supporting sentences, and summary of the paragraph in the end of sentence. The students should also use right grammar rules in writing descriptive paragraph. In the descriptive paragraph, the students must understand the tense used in particular type of the paragraph. It usually used present tense. Vocabulary was checked in terms of the diversity of vocabulary chosen by the students and the number of vocabularies used by the students. It was, therefore, scoring the students' work to be clearer and effective. Last but not least, the students should be reminded to always use correct and exact mechanics in the writing.

3.2 Data Analysis Procedures

The independent t-test was used to know whether the students who write using graphic organizers have better writing quality than the students who write using conventional teaching in writing. ANOVA was used to know the significant difference of the scores of each aspect got from the students' writing between the graphic organizers class and the conventional teaching class in the level of significance of .05.

4. FINDINGS

This section provides the result of the study. The result is described in the table computation by using SPSS 17. There are four tables. Table 1 shows group statistics that provides the difference means score of the ELT students' writing quality who write by using graphic organizers and those who write by using conventional teaching. Table 2 depicts the independent t-test which provides with the result of measuring the significance score. It shows whether the hypothesis is accepted or not. Table 3 shows the descriptive statistics on aspect of writing. Table 4 presents the ANOVA analysis on aspects of writing.

Table 1. Group Statistics

	Conventional Teaching	N	Mean
Graphic Organizers	1.00	30	77.63
	2.00	30	70.03

Table 1 depicts the result of the students in writing using graphic organizers and conventional teaching. It shows the difference result which provide with the means score of the ELT students 'writing quality. The means score of graphic organizers class is 77.63. Then, the means score of the conventional teaching class is 70.03. Based on the two means score, it can be seen that both of the groups are significantly different. To support the fact that the two groups are shown differently, it can be shown by using independent sample t-test used to know whether there is a significant difference between the graphic organizers and conventional teaching class. The detail result is in appendix 1.

Table. 2 Independent Samples Test

VAR00001	Levene's Test for Equality of Variances			t-test for Equality of Means		
	F	Sig.	t	Df	Sig. (2-tailed)	
					.004	14.180
Equal variances assumed	8.756	.004	14.180	58	.000	
Equal variances not assumed			14.180		38.773	.000

Table 2 displays the result from the independent sample t-test which exhibits the significant difference of the sig. 000 in t-test for equality of means. This result is under the p value .05 of significance level. The groups which are treated by using graphic organizers and conventional teaching are significantly different. It can be verbalized that there is a significant difference between the two groups in the part of equality of means. The students who write by using graphic organizers have better writing quality than that the students who write by using conventional teaching. This means that H0 can be rejected. The detail result can be seen in appendix 2.

Table 3. Result of Descriptive Statistics on Aspects of Writing Descriptive Statistics

			95% Confidence Interval for Mean						
			N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	
								Minim um	
Scores_ of Content	Graphic Organizers	30	20.53	1.77	.32	19.87	21.19	14.00	21.00
	Conventional teaching	30	14.23	1.27	.23	13.75	14.71	14.00	21.00
	Total	60	17.38	3.52	.45	16.47	18.29	14.00	21.00
Scores_ of Organization	Graphic Organizers	30	18.40	1.52	.27	17.83	18.96	18.00	24.00
	Conventional teaching	30	18.00	.00	.00	18.00	18.00	18.00	18.00
	Total	60	18.20	1.08	.14	17.91	18.48	18.00	24.00
Scores_ of Grammar	Graphic Organizers	30	15.00	.00	.00	15.00	15.00	15.00	15.00
	Conventional teaching	30	14.66	1.82	.33	13.98	15.34	10.00	20.00
	Total	60	14.83	1.29	.16	14.49	15.16	10.00	20.00

Descriptive Statistics

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean			
						Lower Bound	Upper Bound	Minim um	
						um	Maximu m	m	
Scores_of Content	Graphic Organizers	30	20.53	1.77	.32	19.87	21.19	14.00	21.00
	Conventional teaching	30	14.23	1.27	.23	13.75	14.71	14.00	21.00
Scores_of Vocabulary	Graphic Organizers	30	12.00	.00	.00	12.00	12.00	12.00	12.00
	Conventional teaching	30	13.73	2.01	.36	12.98	14.48	12.00	16.00
	Total	60	12.86	1.66	.21	12.43	13.29	12.00	16.00
Scores_of Mechanics	Graphic Organizers	30	11.70	.91	.16	11.35	12.04	9.00	12.00
	Conventional teaching	30	9.40	3.02	.55	8.27	10.52	6.00	12.00
	Total	60	10.55	2.50	.32	9.90	11.19	6.00	12.00

Table 3 shows the result of descriptive statistics on aspect of writing. It depicts the difference mean scores of the writing aspects. The students who are treated using graphic organizers perform better their writing quality than the students who are employed using conventional teaching. It can be seen from the mean significant difference on the content ($20.53 > 14.23$), organization ($18.40 > 18.00$), grammar ($15.00 > 14.66$), and mechanics ($11.70 > 9.40$). However, the students who are treated using graphic organizers perform lower their writing quality than the students who are employed using conventional teaching on vocabulary $12.00 < 13.73$. Overall, the students who are treated using graphic organizers perform better on their writing components on content, organization, grammar, and mechanics. The detail result of the descriptive statistics can be seen on appendix 3. The following is the result of analysis using ANOVA on aspect of writing.

Table. 4 Result of Analysis Using ANOVA on each Aspect of Writing

Between Groups	Sum of Squares	df	Mean Square	F	Sig.
Content	12.150	1	12.150	248.718	.000
Organization	.067	1	.067	2.071	.155
Grammar	.067	1	.067	1.000	.321
Vocabulary	2.817	1	2.817	22.176	.000
Mechanics	8.817	1	8.817	15.897	.000

Based on the table 4 above it can be known that the analysis is significantly different in the mean scores of content, vocabulary, and mechanics, with the p value at .000.

These values are under the .05 of significance level ($p < \text{sig.}05$) indicating that the mean differences are significant. It shows that the students' written product found in the graphic organizers and conventional teaching class have significant difference on the aspects of writing above. However, there is no significant difference in the means score of organization and grammar aspects where the p value of content is .155 and the p value of grammar is .321. Both values are higher than the .05 of significance level and it means that the difference of means is not significant ($p > \text{sig.}05$). Further, the students who work in the graphic organizers and conventional teaching perform equal achievement on two aspects of writing: organization and grammar. The detail results of ANOVA can be seen in appendix 4. To sum up, the students in the graphic organizers class perform better writing quality in the criteria of content, vocabulary, and mechanics than those who do in the conventional teaching.

5. DISCUSSION

This study aims at investigating the effect of graphic organizers on ELT students' writing quality. The result exposes that there is a significant difference between the students who write a paragraph by using graphic organizers and by using conventional teaching. The means score of the students who write a paragraph by using graphic organizers is higher than that of using conventional teaching. The students in the graphic organizers class perform better writing quality in the criteria of content, vocabulary, and mechanics than those who do in the conventional teaching. The study leads to some implications. Graphic organizers is effective in helping the students to write. The students are successful in generating the ideas in writing. By using graphic organizers, the students can perform better writing quality in accordance to the writing aspects of content, vocabulary, and mechanics. Furthermore, graphic organizers can create a social community.

Based on the results above it can be seen that graphic organizers is effective in helping the students to write better. Graphic organizers are used to realize the students' mind into the list of their own important keywords before the students transfer the words into the paragraph clearly. It is in line with Robinson (2015) have found that the graphic organizers encourage the students successfully to have knowledge in the essays writing. The students are encouraged to acquire and enrich English words well especially in written form. By using graphic organizers, the students can develop their paragraphs better. The other result is also depicted by Rahmat, (2020) that an effective learning strategy to help the students in the writing process is using graphic organizers. It can be used to generate better sentences on narratives. Thus, the paragraph contains more complicated structure of better phrases and clauses.

Graphic organizers is effective for the students' mastery in writing. The students can perform better writing quality in accordance to the writing component of content, vocabulary, and mechanics. Those are the contributing factors on the students' writing quality. This present study is in line with the study conducted by Khatib & Meihami, (2015) which show the result of their study on writing components show on content

($p=.003$), vocabulary ($p=.008$), and mechanics ($p=.001$) are under the significance level of .05. Another study by Jumariati & Sulisty (2017) have reported the same result of p value of vocabulary component is .029 under the significance level of .05. The students have better writing skills in accordance to the vocabulary component and it can also improve the content of students' writing (Mustafa & Samad, 2015). The students can determine the concept before they write. The concepts help them to organize the ideas. It is in line with Zaini, et al. (2010) that graphic organizers can improve students' comprehension through the current of significant idea and accompaniment relationship between material and the students' cognitive structure. Thus, by using graphic organizers the students can write in the right concept in expressing their ideas.

The students are successful in keeping the ideas during their writing process. The students also present the good organization. It is supported by Vitanofa & Anwar (2017) which have similarly found that graphic organizers help the students write better based on the topic up through exploring their ideas. It also keeps things in the correct sequential order of writing. The students arrange their writing well orderly. The students manage the organization better. The students write their topic or ideas, topic sentence, supporting sentences, and concluding sentences in paragraph very well (Maharani, 2018). Other study conducted by Unzueta (2009) shows that the graphic organizers improve the students' writing in the overall organization. By using graphic organizers, the students know logically how to write in better organization. Further, Zaini, et al. (2010) also mentions that graphic organizers improve the students' writing in the area of supporting argument, conclusion statement and overall quality. All in all, through having graphic organizers, the students practice how to keep their writing ideas on the track.

Using graphic organizers can create a social community. Many students share one another when they build the organizers on writing. The students motivate other students to create their own graphic organizers in an attempt to help them generate their ideas into writing. It is purposefully to comprehend the entire writing process. It is similar to what Khalaji (2016) states that graphic organizers can create a social community for better environment. Some of the students may have difficulties in drawing the graphic organizers, while other students can help them to make it. It also encourages the students to acquire English interactively. The situation can be recognized as the process of reinforcement in writing. It is supported by Tan (2010) that it is beneficial to be an extensive writing. It can foster the students to write, enhance their writing skills and build the bonding between teachers and students. Thus, graphic organizer not only impact on the students' writing quality but also their concerns to share and work with others.

To sum up, the use of graphic organizers can help the students to have better writing quality because it is effective in generating the ideas in writing. By using graphic organizers, the students can perform better writing quality in accordance to the writing

aspects of content, vocabulary, and mechanics. Furthermore, using graphic organizers can also help the students to create a social community.

6. CONCLUSION

Graphic organizers are effective on students' writing quality. It helps the students keep and generate the ideas, sequences of writing order, and have better organization. By using graphic organizers, the students know how to manage their ideas realizing into better organization such as providing main ideas, supporting details, and concluding sentence in a paragraph. The use of graphic organizers also creates the social community for the sake of better environment. It can be used to help the students to perform better writing quality in accordance to the writing component of content, vocabulary, and mechanics. When some of the students have difficulties in drawing the graphic organizers, other students can help them to identify the problems. It is, therefore effective in helping the students compose a paragraph.

The graphic organizers are then, suggested to be used in writing class. They can be also used to enhance other skills of English, namely reading skill. In the reading class, the students may be assigned to generate their reading comprehension through graphic organizers. Besides, there have been found some weaknesses in using graphic organizers; one of them is when the students only use one model of graphic organizer. The students do not want to try other model of graphic organizers which are provided in the examples. We recommend for the future researchers to realize other various graphic organizer models into research. However, our study still has limitation of the time, it is better if next researchers can conduct other research with assembling more participants and conducting in wider fields and other skills.

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Appendices 1

Table 1.
Group Statistics

		Conventional Teaching	N	Mean	Std. Deviation	Std. Error Mean
Graphic Organizers	1.00	30	77.63	1.12	.20	
	2.00	30	70.03	2.7	.49	

Appendix 2

Table. 2
Independent Samples Test

		Levene's Test for Equality of Variances						t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference				
VAR	0000								6.5271	8.6728	1	9	
1	Equal variances assumed	8.756	.004	14.180	58	.000	7.6000	.53598	6.5271	8.6728	0	1	9
	Equal variances not assumed			14.180	38.77	.000	7.6000	.53598	6.5156	8.6843	3	0	7

Appendix 3

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Scores_ of Content	GO	30	20.5333	1.77596	.32424	19.8702	21.1965	14.00	21.00
	CT	30	14.2333	1.27802	.23333	13.7561	14.7106	14.00	21.00
	Total	60	17.3833	3.52757	.45541	16.4721	18.2946	14.00	21.00
Scores_ of Organization	GO	30	18.4000	1.52225	.27792	17.8316	18.9684	18.00	24.00
	CT	30	18.0000	.00000	.00000	18.0000	18.0000	18.00	18.00
	Total	60	18.2000	1.08612	.14022	17.9194	18.4806	18.00	24.00

Descriptives

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Scores_ of Content	GO	30	20.5333	1.77596	.32424	19.8702	21.1965	14.00	21.00
	CT	30	14.2333	1.27802	.23333	13.7561	14.7106	14.00	21.00
Scores_ of Grammar	GO	30	15.0000	.00000	.00000	15.0000	15.0000	15.00	15.00
	CT	30	14.6667	1.82574	.33333	13.9849	15.3484	10.00	20.00
Scores_ of Vocabulary	GO	30	12.0000	.00000	.00000	12.0000	12.0000	12.00	12.00
	CT	30	13.7333	2.01603	.36807	12.9805	14.4861	12.00	16.00
Scores_ of Mechanics	Total	60	14.8333	1.29099	.16667	14.4998	15.1668	10.00	20.00
	GO	30	12.0000	.00000	.00000	12.0000	12.0000	12.00	12.00
	CT	30	13.7333	2.01603	.36807	12.9805	14.4861	12.00	16.00
	Total	60	12.8667	1.66180	.21454	12.4374	13.2960	12.00	16.00
Scores_ of Content	GO	30	11.7000	.91539	.16713	11.3582	12.0418	9.00	12.00
	CT	30	9.4000	3.02404	.55211	8.2708	10.5292	6.00	12.00
	Total	60	10.5500	2.50034	.32279	9.9041	11.1959	6.00	12.00

Appendix 4

ANOVA

Score of Content

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.150	1	12.150	248.718	.000
Within Groups	2.833	58	.049		
Total	14.983	59			

Score of organization

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.067	1	.067	2.071	.155
Within Groups	1.867	58	.032		
Total	1.933	59			

Score of grammar

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.067	1	.067	1.000	.321

Within Groups	3.867	58	.067
Total	3.933	59	

Score of Vocabulary

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	2.817	1	2.817	22.176	.000
Within Groups	7.367	58	.127		
Total	10.183	59			

Score of Mechanics

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.817	1	8.817	15.897	.000
Within Groups	32.167	58	.555		
Total	40.983	59			