Redirecting EFL writing instruction through mind mapping technique in senior high school

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ABSTRACT

The purpose of this research was to see the effects of Mind Mapping Technique toward students' writing ability especially in writing descriptive text. The results of Post-test experiment and control class were used to confirm the hypothesis. The population of this research was all of the students at X grade of Senior High School 3 Padang Panjang, consisting of 96 students who spread in 3 classes. Two classes were taken as sample by using cluster random sampling. Writing test was used to collect the data. The treatments were done in six meetings. The data of this research were analyzed by using Statistical Product and Service Solution (SPSS) Program. The result showed that the mean score of students' post-test at experimental class was (65.94) higher than those of control class (58.16). The calculation of the test showed that t-calculate was (8.27) higher than t-table (1.67) at the significant level of .05 meaning that students who were taught through Mind Mapping technique produced better writing skills in descriptive text. It can be concluded that teaching writing by using mind mapping technique gave significant difference on students' writing ability at X grade of Senior High School 3 Padang Panjang. Therefore it is recommended that English teachers should use this technique to improve students' writing ability.

Keywords: writing ability; mind mapping technique

INTRODUCTION

Teaching and learning process of EFL writing in both Junior and Senior High Schools in Indonesia today may have been a lip service in the parts of English teachers, the business that is only to satisfy the curriculum designers at the top level and the school principals at the lower one. Countless evidences show that students have not been taught to write well and there were no satisfying products of such writing were validated or considered. In fact, EFL learning to write has been an ongoing process which may have been exclusively stand alone, as Graham et.al. (2013:19) point that successful process of writing is influenced by several factors such as 'context in which writing takes place and changes in students' writing skills, strategies, knowledge, and motivation'. The issue may have been burnt from teaching that is not based on research that gives insights to the current teaching practices. Although 'writing' is the most complicated skill to be acquired by the learners in English learning, because it requires the writers to involve higher cognitive competence such as the capability to analyze, construct, edit and revise ideas to produce a qualified writing, continuous efforts must be initiated to help such novice writers to propose their ideas on papers. Writing stimulates thinking, compels students to concentrate and organize their ideas, and cultivates their abilities to summarize, analyze, and criticize (Scane, Guy & Wenstrom, 1991). On the other hand, it reinforces learning, thinking, and reflecting on the English language (Harmer, 2001).

Grab students' products of writing, and one will easily find ungrammatically correct sentences. English teachers probably claim that students did not know the correct words, less vocabulary, and they did not understand punctuation mark as well as the correct spelling. Harmer (2004) confirms that teaching writing is not just dealing with the mechanics aspects but it is about helping students to communicate real messages in an appropriate manner. In addition, Hyland (2003) contends that the

teaching writing is not only about planning and making a course but it needs some orientations based on the aspects of writing. The orientations on teaching are focusing on language structures, text functions, theme, creative expression, composing process, content, or genre.

Richards and Renandya (2002: 303) state that writing is the most difficult skill for second language and foreign language learners. They define that writing is generating, organizing, and translating ideas into a readable text. Their statements show that learners are getting more than one process in writing. It becomes a problem when learners cannot process their ideas into a text, even sometimes they do not know what to do in the beginning of writing. There are many techniques applied by multiple teachers around the world. One technique that has proven and is capable of optimizing learning outcomes is the mapping technique called mind maps (Mind Mapping). Bukhari (2016) found that when mind mapping are applied in the pre-writing stage of the writing process, they help the learners to not only organize their idea in a hierarchical structure but also enable them to produce linked and better connected concept. Recent research show that mind mapping is the most effective and efficient way to enter, store and retrieve data from or to the brain (Edward, 2009: 64).

Mind mapping does not only show facts, but also the overall structure of a subject and the relative importance of individual part of it. It helps students to associate ideas, think creatively, and make connections that might not otherwise make (Buzan, 2010). Alamsyah (2009) explained that mind maps work well as their visual design enables students to see the relationship between ideas, and encourages them to groups, since the discussion this engenders aids the production of ideas, and makes the tasks livelier and more enjoyable. The mind mapping technique can be used to explore almost any topics in writing, students can improve their ideas and lend themselves to discussing ideas groups.

Since mind mapping techniques explore students' higher cognitive skills, it is relevant with the scientific approach in Curriculum 2013 that required the implement of students higher order thinking. The curriculum of Senior High School expects the students to be able to master the writing ability particularly writing the text types such as narrative, analytical exposition, hortatory exposition, descriptive, recount, persuasive, argumentative, essay etc. those texts are the texts that they can find in their life both inside and outside the class.

Mind Mapping Technique is a concept invented by Buzan which mainly develops information in a human mind and take information from out of brain. It is a creative and effective way that map our ideas (Buzan, 2002). Accordingly, the concept of Mind Mapping is based on how the brain stores information. A credible research shows that the brain is a collection of nerve cell branches that can store the information. It has so many branches. The brain has the ability to store information that is very much from word to word even columns. To recall rapidly, the brain needs a way so that the parts that have been saved can be expressed back into diverse forms. Mind Mapping is a visual record that helps a person to distinguish words or ideas, often with colors and symbols. It generally takes a hierarchical or tree branch format, with branching into their subsections. Mind Mapping allows greater creativity when recording ideas and information, as well as enabling a note taker words related to visual representation. It has the method to facilitate someone to write and recall information that has been stored. In other words, it is an effort to develop the activity of thinking in all directions, capturing thoughts in different angles and develop divergent thinking and creative thinking.

The technique is quite simple in which the students only need some materials, such as blank paper, pens and colored pencils, and imagination. Buzan (2008: 21-23) suggests the following seven steps to make Mind Mapping challenging to every students. Putting the main idea in the center. Placing the main idea or topic in the middle of page will give maximum space for other ideas to radiate out from the center. It gives freedom to expand the ideas to any direction which is a perfect example of radiant thinking in action. Using a picture or photo for the central idea. Pictures have a strong impact on imagination and memory. It also pleases sight and keeps attention focused. Using colors. The use of color is a very good memory marker. Colors on mind mapping are not only to engage the right brain active, but also to help the grouping information. Connecting main branches to the center picture and connect the second and third branches to the first and second. Trying to connect main branches to the center picture and connect the second and third branches to the first and second, and so on because

the brain works according to the association. Making a curve line connector, not a straight line. Draw a connector curve line in each branch to make it more attractive and beautiful. Using One Key Word For Each Line. A single key word gives more energy and flexibility for mind mapping. Using pictures. An image has a lot of meanings because it can replace a keyword or simply reinforce key words that have been written previously.

Mind-maps help teachers not only to teach the students, but also to think, learn, and make meaningful connections between prior knowledge and new knowledge. The maps project ideas, as it is done during brainstorming, show a hierarchical structure and interconnect the major components with the minor details. Gardner identifies eight different types of intelligence (Gardner, 1985, 1999) and mind-mapping can tap these intelligence of larger number of learners. All level students can be provided with appropriate structures through Mind maps to help them to make sense, organize thoughts, and create connections. Besides, Mind maps work similar to human brain and include keywords which are easy to remember. Use of lines, arrows, color-coding, pictures, and symbols in Mind maps not only makes the process of writing interesting but also suits the learning profile of individual learner.

There are several types of mind mapping that are generally used such as Network Tree, Event Chain, Cycle, and Spider (Buzan, 2002). A network tree mind map is something similar to the overall structure of a number of tree branches. Generally, the shape of such type can go either left or right-hand side direction. Tree mind map can be used in many different fields like business analysis or language learning.

The events chain concept map can be used to give a sequence of events, steps in a procedure, or stages in a process. In a cycle mind map, a series of events does not produce a final result. The last event in this cycle links back to the first/main event. Because there is no result and the last event connect back to the first/main event, the cycle repeats itself. Spider mapping which is sometimes called Semantic map is a graphic organizer that can be used for brainstorming ideas, aspects, and thoughts of normally a single theme or topic. It gets its name because of the way it looks when drawn out. In this study, we preferred to use the second type of mind mapping, namely event chain mind mapping. The researcher applied event chain mind mapping because it was in accordance with was needed in the field, besides that genre of this technique was descriptive text and to make outline of descriptive text using mind mapping technique was suitable for use in this research.

Picture 1: Min Mapping Concept

The main problem of this study was "Does Mind Mapping technique give significant effect to students' writing ability? Based on the above problem, then, the purpose of this research was to find

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out the effect of mind mapping technique towards students' writing ability.

METHODS

Using simple random sampling technique, the researchers prepared the materials and instruments to be experimented. The treatments were to determine the effect of mind mapping in writing. After the groups received treatment, the next step was providing the same post-test to both groups. In this process, it is known whether the experimental group experienced a greater improvement and significance than the control group.

In this research, the population is students in class X IPA at Senior High School 3 Padang Panjang. The total number of the population is 96 students.

TABLE 3.1 Population of the research

No	Class	Total Students
1	X IPA$_1$	32
2	X IPA$_2$	32
3	X IPA$_3$	32
	Total	96

Source: English Teacher at Senior High School 3 Padang Panjang

The normality and homogeneous data were obtained from Kolmogorov-Smirnov

TABLE 3.2 Test of Normality and Test of Normality

AR00002	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	tatistic	f	ig.	tatistic	f	ig.
IPA 1	10		200	95		26
AR00001 IPA 2	08		200	96		38
IPA 3	10		20	97		67

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

TABLE 3.3 Homogenity Test and Test of Homogeneity of Variances

Levene Statistic	f1	df2	ig.
1.149		62	288

Based on SPSS output above, the value of the variable significance of English students of all classes is variable based of 0.245 and greater than 0.05, the means have the same variant or homogeneous, based on the graphics Q-Q Plot (see in appendix) if the data around and near with the line, it means the data was normal. After getting population, researcher continues the next step to find the sample of this research.

The instrument of this research was writing test. The test was made by researcher and it aimed to obtain the data of students' writing ability. The instruments used to achieve the accuracy of the data and they can indicate the success research. In this research, the researcher apply a test model. So, the instrument that use here is a test to measure the students' skill in writing. In this research, the instrument that the researcher used in collecting the data was writing test. It was used to know whether

mind mapping gave significant effect on students writing ability or not, especially to build the idea, content, organization, Vocabulary, and So on.

The researcher uses Jacob's criteria (1981:90) in scoring the students' paragraph because it would be easy for researcher to score the students paragraph. The researcher used two classes to collect the data, the researcher taught the students by using mind mapping technique for experimental class, and used conventional technique for control class. However, the material of this research was the same writing material. In short, the researcher implements this procedure.

First, giving the students some topic and asked them to choose the topic. Next, the students write the main idea about the topic with mind mapping technique with follow Buzan steps (2008) such as putting the main idea in the center, after that the students should draw or put the photo or picture and using color for each branches. Next steps, the students should connect every branches by using curve line and each branch must have one key word. While for control class, they were taught the same topic but with conventional technique.

The data was collected through a post- test score. Researcher gives both of group's different treatment for writing test. Data of this research was used the students' post- test score. The post- test score was taken in the last meeting after giving the treatment, and the students' writing would be scored by the researcher and English teacher at Senior High School 3 Padang Panjang. After giving treatment to the students, the researcher taught both the experiment group and control group. Finally, both groups would be given the post test. The post – test is administered to get final result of the research. To analyze the students' score in post-test, the researcher use T- test formula taken from (Sudjana, 1996). In this case, T-test mean a statistical procedure use to determine whether both of groups are in the same ability or not.

RESULTS AND DISCUSSION

Actually, there are 64 students who are involved in the post test. Those students were divided into two classes, 32 students for experimental class and 32 students for control class. The writing test was evaluated by considering five components based on Jacob theory; content, organization, vocabulary, language use, and mechanics.

All of the data were analyzed to find out the maximum and minimum scores, mean scores and standard deviation of post test of experimental and control class. The post-test data of experimental and control classes were shown as follow:

TABLE 4.3 The Score of Writing Test of Experimental Group and Control Group

No	Component	Experimental	Control	Difference
1	Content	19,75	18,06	1,69
2	Organization	15,53	13,59	1,94
3	Vocabulary	13,91	12,16	1,75
4	Language Use	13,78	11,53	2,25
5	Mechanics	2,97	2,94	0,03

Based on the explanation above showed the students' writing competence in aspects of content, organization, vocabulary, language use and mechanic has really developed and the use of Mind Mapping technique for experimental have higher performance than Conventional technique. It means that the hypothesis of this research was accepted.

Class		Highest Score	Lowest Score	Mean (X)	Total score	Standard Deviation
Control	2	86	35	58.16	1861	15.1
Experimental	2	90	46	65.94	2110	13

The total score of writing test of both groups was significantly different. The total score of control group was 1861 the highest score was 86, the lowest score was 35 and standard deviation was 15.1. On the contrary, the total score of experimental group was 2110 the highest score was 90 the lowest score was 46 and standard deviation was 13.

The analysis used this formula:

a) Control Class

Based on the data above, the data shows that the mean of control class is 58.16 and standard deviation 15.1.

X_{max} : 86   n : 32   R : X_{max} - X_{min}
X_{min} : 35   I : R/K   K : 1+3.3 log n

Note :
I = Interval
R = Range
K = Number of Classes
    R : X_{max} - X_{min}
    = 86-35 = 51
    K : 1+3,3 log n
    = 1+3,3 log 32
    = 1+4,96
    = 5,96
    I : R/K = 51/5,96 = 8,6 = 9

From the table above, it was found that most of students' writing descriptive text scores of posttest in the control class was about 35-43, there was 5 or 15,6% student got score at that interval, while the interval 44-52 there were 10 or 31,2% students, at interval 53-61 there were 6 or 18,7% students who got score at that interval, at interval 62-70 there were 2 or 6,2% students, at interval 71-79 there were 6 or 18,7% students, at interval 80-88 there were 3 or 9,3% students,

Besides that, based on the table about *students' writing scores of posttest control class,* the result of writing descriptive score in post-test there were 5 students who standard score (KKM) or higher: 2 students who got score 78, a student who got score 81, 1 students who got score 83, and the last students got score 86, and the rest of students got lower that standard score (KKM). The result of post-test in control class could be seen in the table below:

TABLE 4.6 Post-test scores of control class at Senior High School 3 Padang Panjang

Class	Highest Score	Lowest Score	Mean (X)	Total score	Standard Deviation
Control 2	86	35	58.16	1 861	15.1

Based on the table above, we know that the highest scores of students' writing skill in control class after taught by using conventional technique was 86 while the lowest score was 35, the mean score was 58.16 and standard deviation was 15.1.

b) Experiment Class

Based on the data above, the data shows that the mean of experimental class was 65.78 and standard deviation 12.90.

X_{max} : 90   n : 32   R : X_{max} - X_{min}
X_{min} : 46   I : R/K   K : 1+3.3 log n
    Note :
    I = Interval
    R = Range
    K = Number of Classes
    R : X_{max} - X_{min}

= 90-46 = 44
K : 1+3,3 log n
= 1+3,3 log 32
= 1+4.96
= 5,96
I : R/K = 44/5.96 = 7.3 = 7

From the table above, it was found that most of students' writing descriptive text scores of posttest in the experimental class was increased. The interval between 46-52, there was 6 or 18.75% student got score at that interval, while the interval 53-59 there were 6 or 18.75% students, then at interval 60-66 there were 5 or 15.62% students who got score at that interval, at interval 67-72 there were 5 or 15.62% students, at interval 73-79 there were 4 or 12.5% students, at interval 80-86 there were 3 or 9.3% students, at interval 87-93 there were 3 or 9.3% students.

Besides that, based on the table about *students' writing scores of post-test experimental class,* the result of writing descriptive score in post-test there were 20 students who get higher than standard score (KKM): 2 students who got score 75, a student who got score 76, 2 students who got score 77, 2 students who got score 82, 2 students who got score 84, 5 students who got score 86, a student who got score 88, a student who got score 89, 2 students who got score 92, 2 students who got score 98. 7 students who got lower that standard score (KKM). In conclusion most of students who got higher score than lower score. The result of post-test in experimental class could be seen in the table below:

TABLE 4.9 Post-test scores of experiment class at Senior High School 3 Padang Panjang

Class	Highest Score	Lowest Score	Mean (X)	Total score	Standard Deviation
Experimental 2	90	46	65,78	2105	12,9

Based on the table above, we know that the highest scores of students' writing descriptive text in experimental class after taught by using Mind Mapping technique was 90, while the lowest score was 46, the mean score was 65,78 and standard deviation was 12.9.

Inferential Data Analysis

The prerequisite is necessary to determine whether the analysis of data for hypothesis testing can be continued or not. Some data analysis techniques demanding test prerequisite analysis. Analysis of variance requisite that data come from a population with normal distribution and group compared to homogeneous data.

The Normality of Distribution Test

Test of normality English speaking class sample was done by using test liliefors). It was intended to see whether the data normal or not based on steps in chapter III. Based on that step, so the researcher got the test of normality as the table below:

TABLE 4.10 The Result of Testing Normality Writing Post-Test Tests of Normality

	Kelas	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statisti	d	Sig.	Statisti	D	Sig
Nila	Kelas Kontrol	.17	3	.01	.93	3	.05
	Kelas Eksperimenta	.08	3	.200	.95	3	.25

a. Lilliefors Significance Correction

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	Kelas	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statisti	d	Sig.	Statisti	D	Sig
Nila	Kelas Kontrol	.17	3	.01	.93	3	.05
	Kelas Eksperimenta	.08	3	.200	.95	3	.25

*. This is a lower bound of the true significance.

The table above was obtained a significance value of experimental class 0.274 and control class 0.054. The significance score > 0.05 and in accordance with the testing criteria that the data was normally distributed if the significance score > 0.05. It can be concluded that the experimental class and control class score normally distributed.

The Homogenity of Variance Test
Variant test of homogeneity experimental and control classes was done by using SPSS. Based on the result, it was got result test of variance homogeneity sample class. It can be seen in the table below:

4.11 The Result of Testing Homogenity Writing Post-Test Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
1.270	1	62	.264

Based on the table above, obtained a significant score based on the mean 0.264. According to the criteria of testing that the data had homogeneous variances if significant based on the mean score > 0.05, it can be concluded that the data in the research had homogeneous variance.

After the scoring posttest of experiment and control class had been analyzed, the value of t-calculated was obtained. Then the values of t-calculate compared with the value of t-table. If the value of t-calculated less or equal than t-table at the level of significant 0.05, it could be concluded there was no significant difference towards the students writing ability in both experiment and control class. It means the hypothesis was rejected. Meanwhile if t-calculated is bigger than t-table at level significant 0.05. It can be concluded that there is the significant difference in students writing between these classes. It means that the hypothesis was accepted.

The calculation could be seen as follow:

$$t = \frac{\overline{X_1} - \overline{X_2}}{s\sqrt{\dfrac{1}{n_1} + \dfrac{1}{n_2}}}$$

$\overline{X_1} = 65.68$ $\qquad n_1 = 32$ $\qquad S_1^2 = 15.24$

$\overline{X_2} = 59.75$ $\qquad n_2 = 32$ $\qquad S_2^2 = 34.91$

Where:
$\overline{X_1}$: Mean score of experimental group
$\overline{X_2}$: Mean score of control group

S_1^2 : Standard deviation of experimental group
S_2^2 : Standard deviation of control group
n_1 : The number of subject of experimental group

n_2 : The number of subject of control group

$$S^2 = \frac{(n_1-1)\,s_1^2 + (n_2-1)\,s_2^2}{n_1 + n_2 - 2}$$

$$= \frac{(32\text{-}1)\ 15.24 + (32\text{-}1)\ 34.92}{32+32-2}$$

$$= \frac{(31)\ 15.24 + (31)\ 34.92}{62}$$

$$= \frac{472.44 + 1082.52}{62}$$

$$= \frac{1554.96}{62}$$

$S^2 = 25.08$

$S = \sqrt{25.08}$

$S = 5.0079$

$$t = \frac{\overline{X}_1 - \overline{X}_2}{S\sqrt{\dfrac{1}{n_1} + \dfrac{1}{n_2}}}$$

$$= \frac{65.68 - 59.75}{5.0079\sqrt{\dfrac{1}{32} + \dfrac{1}{32}}}$$

$$= \frac{5.93}{5.0079\sqrt{\dfrac{2}{32}}}$$

$$= \frac{5.93}{5.0079\sqrt{0.0625}}$$

$$= \frac{5.93}{5.0079(0.25)}$$

$$= \frac{6.87}{1.25}$$

$$= 5.49$$

$t_{\text{Calculate}}$ $\quad : (n_1 + n_2 - 2)$

$\quad\quad : (32 + 32 - 2) = 62$

$\quad\quad \alpha = 0.05$

$\quad\quad$ t- table $= t_{(1\text{-}\alpha)}\,(df)$

$\quad\quad\quad = t_{(1\text{-}0,05)}\,(62)$

$= t_{(0,95)}\,(62)$

$= 1.66980$

t- Table $= 1.66980$

t- Calculate > t- table

5.49 >1.66980

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From the result above, it can be seen that t-calculate in this research is 5.49 while t-table is 1.66980 and the level of significance is 0.05. In conclusion, the value of t-calculated was bigger than the value of t-table. It meaning that Mind Mapping technique significantly affects students' writing ability.

Mind Mapping Technique is a concept invented by Buzan but has been widely used for teaching various subject matters. It mainly teaches students to develop information in a human mind and take information from out of brain. The implementation of this strategy in teaching writing has been very significant to develop and organize their ideas. According to Buzan (2009: 12), Mind Mapping is a storage system, with draw data, and exceptional access to giant library, which actually exist in the amazing brain, because Mind Mapping helps collate and store as much information as desired, and group with a natural way.

Related to the purpose of the research, that is to know whether there is significant effect of students' writing ability by using Mind Mapping Technique of X grade of Senior High School 3 Padang Panjang, it was found that there was significant effect on students' writing ability in which the mean score of experimental class (82.51) was higher than control class (75.27). Generally, the students were provided the chance to organize, construct vocabulary, and use the language and mechanic. However, the significant effect on students' writing ability was found in content and language use.

Great opportunity provided by Mind Mapping technique to construct the text have enabled students to open up their minds and connect them with current issues dealing with social development. This is line with Graham (2013) that 'the purposes and meaning of writing are shaped by cultural, societal, and historical factors' (p.19). Mind mapping technique also helped the students in developing and organizing ideas clearly in writing. By connecting each branch with the other branches and using a curve line helped them to organize the text more clearly. The third is vocabulary, the differences score was 1.75 it means that mind mapping technique helped the students highly in mastering vocabulary and the students developed their knowledge of vocabulary. By using one key word for each branches its help the students to master in vocabulary and make the ideas clearly.

Next is language use. In constructing the text, the students consider whether the language or grammar is best suited for the purpose of the paper or the type of assignment. The differences score between Control and experimental class is 2.25, it shows that students are better in language use component. Language use is related to the third steps of mind mapping using colors, because using color is a very good memory, not only to engage the right brain active, but also help the grouping information.

Last is mechanics, with the differences was 0.03 it showed that students had sufficient capability in using appropriate mechanics such as punctuation mark, spelling and capitalization. It is related to the last steps of mind mapping using picture for each branches. An image a lot of meaning because it can replace a simply reinforce especially in punctuation mark and capitalization.

Buzan (2008: 21-23), suggests seven steps to make Mind Mapping such as: putting the main idea in the center, then using photo or picture, using color, next connect the main branch with the another branch after that making a curve line to connect each branches and the last one is using just one key word for each branches. The seven steps above can be applied in writing process such as putting the main idea in the center it is part of content, after that using photo or picture, using a curve line it is include in organization in writing. Next, make one keyword it is part of organization and last is using colors.

Based on the procedures above, it can be said that Mind Mapping technique can be started by putting the main idea about the text at the center. Then, the writer needs to using a picture or photo about the topic and using the color to make the mapping more interesting, after that the writers need to connect the main branches with the another branches by using a curve line. And finally the writes should use just one key word for the each branches. Thus, there are the procedures or steps that must be done to apply the technique in classrooms. In summery, this technique helps students in the writing process.

CONCLUSION

As has been put earlier that Mind Mapping technique helps students' writing skill on descriptive text significantly at Senior High School 3 Padang Panjang. Through Mind Mapping technique, the students are able to write better than the students whom were taught without Mind Mapping technique. The success of this research can be proved by the result of students' score on writing testing of both classes.

Based on the result of the research, it can be concluded that using Mind Mapping technique affects students' writing skill. It can be seen from the mean score of experimental class. After post-test, experimental class have mean score (65.94) is higher that the students scores in control class (58.16) that were taught without using Mind Mapping technique. While, the analyzing of data showed that the value of t-calculated 8.27 is higher than the value of t-table 1.669, at the degree of freedom (32+32-1) = 52. This indicated this hypothesis was accepted. The data shows that all of components of students writing also improve after using Mind Mapping technique in teaching and learning process than not used it. It is proved by the significance differences of students' score in the experimental class and control class in term content, organization, vocabulary, language use and mechanics. First, in experimental class, the mean score of post-test of the students' content was 19.75, while, the mean score of post test of the students' content in control class was 18.06. with differences 1.69. Second, the mean score of post test of the students' organization was 15.53. meanwhile in control class, the mean score of post-test of students' organization was 13.59 with differences 1.94. Third, the means score post test of students' vocabulary is 13.91, in the other, the means score post test of students' vocabulary is 12.16 with differences 1.75. Fourth, the means score of post test of students' language use is 13,78. In the other class, the means score of post test of students' language use is 11,53, differences are 2.25. Fifth, the means score of post test of students' mechanics is 2.97. In the other class, the means score of post test of students' mechanics is 2,94. Both of the classes differed .03.

Related to the conclusions above, it is safe to say that teaching writing through Mind Mapping technique affects students' writing skill. Related to the statements mentioned in conclusion above, the researcher proposes the following recommendations. *First,* English teacher should consider the implementation of Mind Mapping technique as an alternative strategy on students' writing skill because by using this strategy, the students can be more enjoyable in writing and hopeful the students' score in writing is higher too when Mind Mapping technique is used. *Second,* for the students, it will make them easier to write and give the students invaluable benefit because it helps them to write more fun and feel comfort in writing. *Third,* for other researcher in similar field of study, it is suggested to carry out further studies about the effect of Mind Mapping technique on students' writing skill. *The last,* to all readers, may this research will bring you into good understanding how to improve the students' writing skill by using Mind Mapping technique.

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