THE EFFECTIVENESS OF MAPPING WORD IN TEACHING VOCABULARY AT THE TENTH GRADE OF STUDENTS OF SMK HASSANNUDIN PARE

Ary Setya Budhi Ningrum and Eti Kurniasari
STAIN Kediri, East Java
e-mail: ary_oyesip@yahoo.com

Abstract: The purpose of the study was to determine the effectiveness of mapping word as a strategy in teaching vocabulary for the tenth grade students of SMK Hassanuddin Pare. By conducting a quasi-experimental investigation, two out of three existing classes at computer technique class of SMK Hassanuddin Pare in the academic year 2013/2014 were selected by a lottery to experimental and control group. For analyzing the data, Analysis of covariance (ANCOVA) were utilized by using students' pre-test score as the covariate variable. The result finding revealed that there is a significant difference on the students' means score between the experimental and the control groups as evidenced by F(1, 37) = 13.930, *p* (.001) < α (.05). Since the experimental group has the higher means score than the control group; it can be inferred that students who are taught using mapping word have better vocabulary mastery than those taught using non-mapping word. Thus, it can be concluded that using mapping word to teach vocabulary at SMK HASSANUDIN Pare is better than using conventional method.

Keywords: word mapping, teaching vocabulary, a quasi-experimental

Vocabulary has an important function in language. All of languages in the world need vocabulary to help human utter what they want to say. Without vocabulary or word, language is nothing because there is no word to say. Although vocabulary is important in language, it does not mean that other components such as grammar and pronunciation are not important. All of these are learned together because they are attached each other. Students that have many vocabularies can help them in many ways, such as: in reading and writing. Therefore, teachers have to help their students to improve their vocabulary mastery.

One of the objectives of teaching learning English in Indonesia nowadays is to develop communicative competence for spoken and written. In this case, the researchers focus on vocabulary because vocabulary is important for communication purpose. According to Nunan (1991:142), "Teaching vocabulary

regains an important place in the language classroom". Vocabulary refers to knowledge of words regarding its forms, meanings and how to use it accurately in the context that can be used to convey and receive information in oral and written communication (Pitoy, 2012).

Teaching vocabulary is clearly more than just presenting new words, but it is used as basic of how often they are used by speaker in language. Vocabulary is taught not only to get the new word but also to get the knowledge. In language, there are so many words which they can help the speakers to utter what they want to say, feel, thought, and etc. This is because when the speaker uses the word, the others will understand about the meaning. Every word has meaning; there is no word that does not have meaning.

Though everyone knows that vocabulary is important, most of students have a limited vocabulary. It is so because there are some problems known in teaching vocabulary to students. One of the problems is many students feel bored when they are taught vocabulary because they feel difficult to memorize or to understand the meaning. Thus, as an English teacher, it is a challenge on how to make students to be able to remember and memorize new words easily, and makes them fun to learn vocabulary. Byrne (1985) argues that unless there is some challenge, the learner may not be interested enough in learning new vocabulary to give his full attention to the teaching. It means that students will not pay attention to the teaching and having no interests in learning vocabulary. So, as a teacher we need to make something different so that students are interested in learning. As a consequence, we must have a good technique and strategy used to enrich student's achievement in vocabulary.

There are some different approaches or techniques used to help students develop their vocabulary and understand the meaning of a word. One of the examples of teaching vocabulary technique is mapping word. Mapping word is a visual organizer that increases vocabulary development. Mapping word is expected to be able to help the students easier to understand about words and memorize it. Rosenbaum (2001) states that "The map would provide a frame work and, except for the repeated exposure to the same words through practice and testing, it is satisfied all the criteria for effective vocabulary instruction."

Using mapping word, students think about terms or concepts in several ways. Harmon in Rosenbaum (2001:45) states that word map organizers can be used by the teachers to clarify word meaning by engaging students in developing a definition, synonyms, antonyms, etc for a vocabulary word or concept that is given. This technique can be used to improve student's vocabulary and it is able to help students to memorize easier because students have to find some words which have relationship to the main word. In this case, the students will feel that learning vocabulary is not difficult. In addition, this technique will make them interested and excited in learning English. Moreover, using this technique students can work in-group or individually.

An experimental study conducted by Rohania (2012) for the seventh grade students of SMPN 1 Mande Cianjur showed that mapping word technique is effective in teaching vocabulary, and it could improve the students' vocabulary mastery. Thus, in this study the researchers are interested in implementing mapping word technique in teaching vocabulary that is never conducted at

Vocational High School especially for the tenth grade students at computer technique class of SMK Hasanuddin Pare. We want to know and give evidence whether or not mapping word technique is effective for teaching vocabulary to the tenth grade students at computer technique class of SMK Hasanuddin Pare. Based on the background above, the problem of the research is formulated as follows: Do the students taught using mapping word have better vocabulary mastery than those taught by non-mapping word?

RESEARCH METHOD

In this study quasi-experimental quantitative design is employed to prove whether mapping word technique is effective in teaching vocabulary for students by comparing two groups of research. They are experimental and control group. In this case, the experimental group is taught by using mapping word, and the control group is taught by using non-mapping word or conventional teaching.

There are two kinds of tests are administered to the students in both groups, namely pre-test and post-test. The experimental design of this study is illustrated in Table 1.

Table 1 Experimental Design

Group	Pre-test	Treatment	Post-test
Experimental Group	Pre-test	Treatment	Post-test
Control Group	Pre-test	No Treatment	Post-test

Population and Sample

Population of this study is the tenth grade of students at computer technique class of SMK Hassanuddin Pare in the academic year 2013/2014. There are three classes of the tenth grade of students at computer technique class of SMK Hassanuddin Pare in the academic year 2013/2014, namely X TKJ1, X TKJ2, and X TKJ3. Two out of three classes are taken as the samples. By using lottery, X TKJ2 class is chosen as an experimental class and X TKJ1 class is a control class. There are 20 students in each class.

Research Instrument

In this study, vocabulary test is developed as the instrument to collect the data. In developing the vocabulary test, the researchers determine what the appropriate type of test to be used. A good test is when a test is not very easy and not very difficult. To know whether the test is good or not, the researchers try it out first and then check its reliability, validity, level of difficulty, and discrimination power.

Try-out is basic result that is used to make sure that the test is good or not. The try-out is conducted at class X AK-2. The subjects of the try-out test consist of 20 students. There are 76 items in multiple choices. After doing try-out, the researcher knows the validity and reliability in every item.

a. Validity

Validity is the degree of correctness from the assessment result in representing the skill being assessed. A test must be appropriate with the

objective. Content validity is defined as any attempts to show that the content of test is representative sample from the domain that is to be tested (Fulcher & Davidson, 2007). Content validity is concerned what goes into the text, thus the degree of content validity is related to how to measure a content of test studied. Therefore, the researchers use indicators to determine whether the content of test is valid or not.

Table 2 Table of Specification of Vocabulary Test

Indicators	Total	Numbers
Be able to remember and memorize the antonym of word	13	3,4,12,13,19,24,25,32, 33,34,37,38,41
Be able to remember, memorize and also mention the synonym of word	9	5,6,11,14,17,18,26,27, 35
Be able to explain the definition or meaning of word	16	7,8,15,16,22,23,28 , 30,31, 36, 39, 40, 42, 43, 44, 45
Be able to change the form of word based on part of speech	7	1, 2, 9, 10, 20, 21, 29

b. Reliability

Reliability can be defined as the extent to which a test produces consistent result when administrated under similar condition (Fulcher & Davidson, 2007). It means the stability of test scores. There are some formulas to measure the reliability of test. In this study, the researcher uses KR-21 to measure the reliability of the test:

$$\text{KR-21}=\frac{K}{k-1}\left[1-\frac{x\,(k-x)}{kS^2}\right]$$

Where:
k = the total of number items in the text
x = mean
S = standard deviation

Djiwandono (2008:224) states that in general, there are four grades of correlation.

0, 90 − 1 = Very high
0, 70 − 0, 89 = High
0, 50 − 0, 69 = Moderate
0, 3 − 0, 49 = Low
Less than 0, 3= Very Low

From the formula above, the researchers will calculate the reliability of test as follows:

$$r=\frac{76}{76-1}\,x\left[1-\frac{47,7\,(76-47,7)}{76\,x\,11,29^2}\right]$$

$$=\frac{76}{75}\,x\left[1-\frac{47,7\,(28,3)}{76\,x\,127,4641}\right]$$

$$= 1,0133 \; x \left[1 - \frac{1349,91}{9687,2716}\right]$$
$$= 1,0133 \; x \left[1 - 0,1393\right]$$
$$= 1,0133 \; x \; 0,8607$$

r = 0,872 or 0, 87

   From the calculation above, the reliability of try out is 0, 87. Based on the criteria of the reliability; it means that the reliability of test is high.

c. Level of Difficulty

   The level of difficulty is one of the characteristics that show the quality of item test, it is good or not. Outgrow difficulty level can be counted by noticing the right answer of participant's test. The level of difficulty can be counted by using formula as follows:

$$\mathbf{P = \frac{B}{N}}$$

Where:

P = index of difficulty

B = the number of students who answer correctly

N = the total number of students

   According to Arikunto (2001:210), the category difficulties of level are as follows:

0, 70 – 1, 00 : Easy

0, 30 – 0, 70 : Medium

$P \leq$ 0, 30 : Difficult

   After getting P value, the final computation result of difficulty levels for each item is numbers 14, 41, 52, 55, 62, 63, 65, and 67 are considered as difficult items. Then, numbers 3, 4, 6, 11, 15, 18, 21, 23, 24, 26, 27, 31, 33, 37, 40, 44, 45, 49, 50, 51, 53, 54, 57, 58, 59, 60, 66, 68, 69, 70, 73, 75, and 76 are considered as medium items. And, numbers 1, 2, 5, 7, 8, 9, 10, 12, 13, 16, 17, 19, 20, 22, 25, 28, 29, 30, 32, 34, 35, 36, 38, 39, 42, 43, 46, 47, 48, 56, 61, 64, 71, and 74 are considered as easy items.

d. Discrimination of Power

   The index of discrimination power of the test item is the difference between the correct and incorrect number of high and low students. To estimate the item of discrimination power, we compare the number of students in upper and lower group for their answering the item correctly. The formula of discrimination power is as follows:

$$\mathbf{D = \frac{T - R}{N}}$$

Where:

D = the discrimination power

T = the number of students in upper group who answered the item correctly

R = the number of students in lower group who answered the item correctly

N = the number of student in upper and lower group

According to Arikunto (2001:218), the classifications of discrimination of power are:

0,70 – more   = Excellent
0,40 – 0, 70   = Good
0,20 – 0,40   = Satisfactory
0,00 – 0,20   = Poor (no discrimination)
0,00 – less   = bad (discrimination)

The good test should reach discrimination index 0,40 – 0,70 or more. The bigger result of discrimination is better; it means that the discrimination of test is effective. After getting D value, numbers 4, 6, 9, 11, 18, 21, 23, 24, 38, 45, 46, 50, 51, 52, 53, 55, 57, 61, 65, 67, and 71 are considered as good items. While numbers 2, 3, 8, 12, 17, 27, 30, 34, 35, 40, 43, 47, 48, 56, 63, 64, 66, 69, 74, and 76 are considered as satisfactory items. Then, number 1, 5, 7, 10, 13, 14, 19, 20, 22, 25, 29, 32, 39, 41, 42, 60, 62, 70, 73, and 75 are considered as poor items. And number 15, 16, 26, 28, 33, 36, 37, 44, 49, 68, and 72 are considered as bad items, it means that they need to discriminate. But, number 54, 58, and 59 are considered as excellent items because their discrimination index is more than 0, 70.

Based on the computation result of level of difficulty and discrimination power for each item of the test in the try out; therefore, the numbers of items used in pre-test and post-test are 45 numbers. They are numbers 2, 3, 4, 6, 8, 9, 11, 12, 17, 18, 21, 23, 24, 27, 30, 31, 34, 35, 38, 40, 43, 45, 46, 47, 48, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 61, 63, 64, 65, 67, 69, 71, 74, and 76.

Treatment Procedure

In this study, the treatment given to the experimental and the control groups is different. The experimental group is taught by using mapping word, whereas the control group is taught by using conventional teaching or not using mapping word technique. However, the material given to both groups is same. The difference is only on the strategy given to both groups. The activity given for the treatment to both groups is illustrated in Table 3.

Table 3 Treatment Procedure in the Experimental Group and the Control Group

Activity	Experimental Group	Control Group
Pre-activity	Opening	Opening
	Check attendance and Presentation about the material	Check attendance and Presentation about the material
	Teacher explain about narrative text	Teacher explain about narrative text
	Teacher gives a narrative text to the	Teacher gives a narrative text to the students and asks

	students and asks them to read it	them to read it
	Students are asked to prepare paper and dictionary	Teacher gives and writes 10 words in the white board
Main Activity	Teacher explains how to make mapping word	Teacher asks students to identify and make notes about synonym, antonym, definition, and the part of speech of words.
	Teacher gives and write 10 words in the white board	Teacher gives some questions directly
	Students are asked to make mapping word	Students are asked to memorize the word
	Teacher asks to students to identify those words using mapping word	Teacher gives a task to students consisting some questions based on the words
	Students are asked to find the definition, synonym, antonym, other form of the word, and the part of speech using dictionary.	Students do the task
	Students make example and a definition for each word using their own words	Teacher asks students to discuss about their answer with friends
	Teacher gives a task consisting some questions based on the words	Teacher checks the result
	Students do the task	
	Teacher asks students to discuss about their answer with friends.	
	Teacher checks the result	
Post -activity	Closing	Closing

The schedules of the activity done in this study can be seen in Table 4.

Table 4 The Activity Schedule

Activity	Experimental group	Control group
Pre-test	11th April 2014	11th April 2014
Treatment 1	21st April 2014	21st April 2014
Treatment 2	25th April 2014	25th April 2014
Post-test	2nd May 2014	2nd May 2014

Data Analysis

Data analysis is a process in analyzing data. It is done after the data obtained from the score of the test. The scores of the experimental and the control groups are calculated by using procedure of ANCOVA because this sample of the research is not taken randomly and the instrument used is test. In this case, Analysis of Covariance (ANCOVA) is done by using SPSS 21 program.

FINDINGS

In this section, the result of test both the experimental and the control group are presented to check whether the students taught by using mapping word have better vocabulary mastery than those taught by non-mapping word.

The Result of the Pre-Test

Pre-test is used to measure the students' vocabulary mastery before they get treatments. Pre-test is given to both experimental group and control group. The number of the pre-test was 45 items that is given in multiple choices. The time allocation of doing the test was 80 minutes.

The data used in this research is the score of the students' vocabulary at tenth grade of technique computer class (X TKJ) at SMK HASAUDDIN PARE, X TKJ 2 as the experimental group and X TKJ 1 as the control group. The descriptive statistics of the result of the pre-test in experimental and control group is presented in Table 5.

Table 5 The Summary of Pre-test

	Experimental	Control
Number of students	20	20
Highest score	70	70
Frequency of the highest score	2	1
Lowest score	34	38
Frequency of the lowest score	1	1
Mean score	54.80	53.60
Standard deviation	9.288	8.696

Table 5 shows that numbers of students between the experimental and the control group are same. There are 20 students in each group. The highest score in the experimental and the control groups is 70. It means that there is no difference of highest score obtained between the experimental and the control group. Then, the lowest score of experimental group is 34 and the lowest score in

control group is 38. It can be inferred that the control group has the lowest score compare to the experimental group.

From the table, it also shows that the mean score of the experimental group is higher than the control group. The mean score of experimental group is 54.80 and the mean score of control group is 53.60. This table also shows that the standard deviation for mean score of the experimental group is higher than the control group. The standard deviation of experimental group is 9.288, whereas the standard deviation of the control group is 8.696. Regarding the standard deviation, the scores of the control group is considerably lower, which indicated that the scores of the group are more tightly grouped around the mean than those of the experimental group.

The Result of Post-Test

The post-test is given to both groups, the experimental and the control groups. The purpose of post-test is to know the students' vocabulary mastery after getting treatment by using mapping word. The material of post-test is same as pre-test. The number of items is 45 in multiple choices, and the time allocation of doing test is 80 minutes. The summary of the post-test score in the experimental group and the control group is presented in Table 6.

Table 6 The Summary of Post-test

	Experimental	Control
Number of students	20	20
Highest score	84	78
Frequency of the highest score	2	2
Lowest score	60	60
Frequency of the lowest score	1	2
Mean score	74.40	69.10
Standard deviation	6.762	5.409

Table 6 shows that the highest score of two groups is different. The highest score of experimental group is 84 and control group is 78. So, it means that the highest score obtained by experimental group is higher 6 point than control group. Meanwhile the lowest score of two groups is same.

This table also shows that the mean score for the experimental group (74.40) is higher than the control group (69.10). And then, the standard deviation of two groups is different. The standard deviation of the control group (5.409) is lower than the experimental group (6.762). Regarding the standard deviation, the scores of the control group is considerably lower, which indicated that the scores of the group are more tightly grouped around the mean than those of the experimental group.

Analysis of Covariance (ANCOVA)

In this study, Analysis of covariance (ANCOVA) is used to analyze the data by using SPSS. In this research, the students' score in pre-test is used as covariate and the students' score in post-test is used as the data for dependent variable. Before we calculate students' score using ANCOVA, there are some assumptions that we need to fulfill.

Assumption of Normality

The first assumption is that the dependent variable needs to be normally distributed. When the error variances of the dependent variable are normally distributed, it can be referred to normality of the data distribution in the dependent variable. This assumption can be got using one-sample kolmogorov-smirnov test. If the value of $p \geq \alpha$, the error variance is normally distributed. It can be seen in Table 7.

Table 7 One-Sample Kolmogorov-Smirnov Test

		Posttest
N		40
Normal Parameters[a,b]	Mean	71.75
	Std. Deviation	6.613
Most Extreme Differences	Absolute	.108
	Positive	.079
	Negative	-.108
Kolmogorov-Smirnov Z		.684
Asymp. Sig. (2-tailed)		**.738**

a. Test distribution is Normal.
b. Calculated from data.

From Table 7, we could see that the underlying assumption of normality is fulfilled. From the above output, the result is higher than α (0.05), as evidenced by p (0.738) > α (0.05). Therefore, it means that the distribution is normal.

Assumption of Homogeneity Variances

The next assumption is performing testing for homogeneity variances. In this present study, to confirm the assumption of homogeneity of variance Levene's test for equality of variances is utilized. If the Levene test is positive (p < 0.05) then the variances in the groups are different (the groups are not homogeneous), and therefore the statistical assumption is not met. The assumption is fulfilled if the Levene test result is (p > 0.05). The test result of homogeneity variances made by Levene test is presented in Table 8.

Table 8 Levene's Test of Equality or Error Variance [a]

Dependent Variable: post-test

F	df1	df2	Sig.
1.448	1	38	.236

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

a. Design: Intercept + pretest + group

From Table 8, we see that the underlying assumption of homogeneity of variance has been met as evidenced by F (1,38) = 1.448, p = .236. It was, p (0.236) > α (0.05). It means that the variance of two groups between experimental and control group is equal across groups.

Assumption of Homogeneity of Regression

The next assumption needed to be fulfilled is a test of the homogeneity of regression. The test evaluates the interaction between the covariate and the independent variable in the prediction of the dependent variable. To be able to proceed with ANCOVA analysis, there must be no interaction between the covariate and the independent variable (p > 0.05). A significant interaction between the covariate and the independent variable suggests that the differences on the dependent variable among groups vary as a function of the covariate. If the interaction is significant – the results from an ANCOVA are not meaningful– and ANCOVA should not be conducted. The result of test of homogeneity of regression (slope) is presented in Table 9.

Table 9 Tests of Homogeneity Regression (slope)

Dependent Variable: post-test

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1305.889[a]	3	435.296	39.215	.000	.766
Intercept	1670.413	1	1670.413	150.483	.000	.807
Group	10.791	1	10.791	.972	.331	.026
Pretest	969.591	1	969.591	87.348	.000	.708
group * pretest	**28.922**	**1**	**28.922**	**2.606**	**.115**	**.067**
Error	399.611	36	11.100			
Total	207628.000	40				
Corrected Total	1705.500	39				

a. R Squared = .766 (Adjusted R Squared = .746)

Table 9 shows the significant of interaction test between covariate (pre-test) and fixed factor (group). The result of homogeneity of regression can be seen in line of group*pretest that the significance is higher than α 0.05. The significance of interaction test between covariate and fixed factor is F (1,36) = 28.922, p = 0.115. Therefore, it means that there is no interaction between

covariate and fixed factor. Based on this finding, we can proceed with our ANCOVA analysis.

Assumption of a Linier Relationship between Covariate and the Dependent Variable

The covariate is included in the analysis to control for the differences on the independent variable. The primary purpose of the test of the covariate is to evaluate the relationship between the covariate and the dependent variable, controlling for the independent variable (for any particular group). To be able to proceed with ANCOVA analysis, there must be a significant relationship between the covariate and the dependent variable (p < 0.05). The result of test of a linear relationship between covariate and the dependent variable is presented in Table 10.

Table 10 Tests of Linier Relationship between Covariate and the Dependent Variable

Dependent Variable: post-test

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1276.966ª	2	638.483	55.127	.000	.749
Intercept	1653.991	1	1653.991	142.807	.000	.794
Pretest	**996.066**	**1**	**996.066**	**86.001**	**.000**	**.699**
Group	161.332	1	161.332	13.930	.001	.274
Error	428.534	37	11.582			
Total	207628.000	40				
Corrected Total	1705.500	39				

a. R Squared = .749 (Adjusted R Squared = .735)

Table 10 shows that the relation between covariate and the dependent variable is significant, F (1,37) = 86.001, p (0.00) < α (0.05). It means that there is relationship between the covariate and the dependent variable. Had this not been significant, the question then would be on the appropriateness of the selection of the covariate. Based on this finding, it can be concluded that the covariate is linearly related to the dependent variable then the assumption is met.

From the result of the testing of assumptions for ANCOVA, all of the assumptions are met for the calculation. Based on this finding, we can proceed with ANCOVA analysis. In this present study we address the questions to ferret out the effect of word mapping on the students' vocabulary achievement. To answer the questions formulated in this study, we verify the hypothesis of this research.

Hypothesis:

Ho = there is no significant difference between two means of students' score in experimental and control group.

Ha = there is significant difference between two means of students' score in experimental and control group.

The result of ANCOVA can be seen in tests of between-subject effects in Table 11.

Table 11 Tests of Between-Subjects Effects

Dependent Variable: post-test

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1276.966[a]	2	638.483	55.127	.000	.749
Intercept	1653.991	1	1653.991	142.807	.000	.794
Pretest	996.066	1	996.066	86.001	.000	.699
Group	**161.332**	**1**	**161.332**	**13.930**	**.001**	**.274**
Error	428.534	37	11.582			
Total	207628.000	40				
Corrected Total	1705.500	39				

a. R Squared = .749 (Adjusted R Squared = .735)

To evaluate the null hypothesis, the data source as labeled group in Table 11 is used. From the above output, the *p*-value is .001. The result reveals that group value is F(1, 37) = 13.930, *p* (.001) < α (.05).The result of the analysis indicates that the *p*-value turns out to be lower than that of the .05 level of significance. It means that we have enough evidence to reject the null hypothesis. It means there is a significant difference between two means of students' score in experimental and control group.

Table 12 Parameter Estimates

Dependent Variable: post-test

Parameter	B	Std. Error	T	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound	Partial Eta Squared
Intercept	42.647	3.508	12.159	.000	35.540	49.754	.800
Prêt-test	.569	.061	9.274	.000	.445	.693	.699
[group=control]	**-4.048**	**1.085**	**-3.732**	**.001**	**-6.246**	**-1.850**	**.274**
[group=experimental]	0[a]	.	.	.	.	.	.

a. This parameter is set to zero because it is redundant.

From the parameter estimates at Table 12, it can be seen that the control group which did not get treatment get lower value -4.048 than the experimental group. Since the experimental group has the higher means score than the control group; it can be inferred that students who are taught using mapping word have better vocabulary mastery than those taught using non-mapping

word. Thus, it can be concluded that using mapping word to teach vocabulary at SMK HASSANUDIN Pare is better than using conventional method.

DISCUSSION

The objective of this study was to know the effectiveness of mapping word in teaching vocabulary whether the students taught by using mapping word have better vocabulary mastery than those taught by non-mapping word. From the result of this study, it can be concluded that mapping word is effective in teaching vocabulary. The result of this study supported the result of the previous study conducted by Rohania (2012). Rohania's study also showed that teaching vocabulary for the seventh grade students of SMPN I Mande Cianjur through mapping word was more effective than teaching vocabulary using non mapping word.

The result of this study also supported the statement of Rosenbaum (2001) that using word map or mapping word could make students easy to acquire the word knowledge. In addition, according to Joelle (2014) mapping word is an excellent method in vocabulary learning. Using a word map is one way for students to fully understand a word necessary for their educational progress (Cawdrey, 2014). It means that mapping word is an effective method or strategy to increase students' vocabulary mastery. It is able to make the students to generate and improve their vocabulary. Mapping word is different from other method because it needs students to create a map for the word. Most other methods only give the definition of words. So, students do not know more of the word as the synonym, antonym, or the other form of words. In contrast, in this strategy the students have to identify the word not only the meaning but also the synonym, antonym, part of speech, etc. This technique could enrich students' vocabulary. They could have many words from mapping word. Thus, their vocabulary is not limited, and it could help them to improve their skills in language, for example, speaking and writing.

This strategy could make students to be more active in class besides giving positive outcomes for students' vocabulary mastery. It could be seen that the tenth grade students of computer technique class at SMK HASAUDDIN PARE as a subject of the study were very enthusiastic during teaching and learning process by using mapping word.

CONCLUSION

The objective of this study was to know whether or not the students taught by using mapping word have better vocabulary mastery than the students taught by non-mapping word.

Based on ANCOVA output, the result of the study shows that there is a significant difference between the students taught by using mapping word and the students taught by using non mapping word at the tenth grade students of SMK HASAUDDIN PARE.

The test result of between-subject effect, the significance is 0.001. It is less than α 0.05 (0.001 < 0.05). From this result, we have enough evidence to reject the null hypothesis, and the alternative hypothesis "teaching English

using mapping word is effective on the improvement of the students' vocabulary mastery" is accepted. Thus, teaching vocabulary using mapping word is effective, and students taught using mapping word have better vocabulary mastery than those taught using non-mapping word.

SUGGESTIONS

Based on the result finding, some suggestions can be given to the English teachers, the students, and the other researchers.

To English Teachers

As an English teacher, we must be creative and innovative in creating and applying a technique to increase students' ability in learning English especially in teaching vocabulary. Mapping word is one of the appropriate techniques which can help teachers to teach vocabulary and motivate students in learning English.

To Students

Students are the subject in teaching learning. In learning English, students need to have many vocabularies because it is one of components in language that is the most important. Without knowing vocabulary in a language, we will get the difficulty to master any language skills. Therefore, the students can be trained to create a mapping word to help them more understand about word and increase their vocabulary mastery. The students can work individually or in group in creating a mapping word.

To Other Researchers.

The other researchers can use this research as a reference and a source of information to conduct other researches on the same field. Thus, the other researchers can contribute their research finding to the school in order that the students are interested in learning English, especially in learning vocabulary.

REFERENCES

Arikunto, Suharsimi. *Dasar-dasar Evaluasi Pendidikan (Edisi Revisi)*. Jakarta: Bumi Aksara, 2001.

Byrne, Donn, *English Teaching Perspectives,* New York: Longman, 1985.

Cawdrey, Robert, "Giving Reading Direction–Mapping Words". *Legere*. (online) http//www.Legere.org/giving-reading-direction-mappingword.   Retrieved on 5th March 2014.

Djiwandono, M. Soenardi, *Tes Bahasa Dalam Pengajaran*. Jakarta: Indeks, 2008.

Fulcher, Glenn & Fred Davidson. *Language Testing and Assessment,* New York: Routledge, 2007.

Hatch, Evelyn & Hansein Farhady, *Research Design and Statistics for Applied Linguistic,* London: Rowley, 1982.

Joelle. "Effective Strategies for Teaching Vocabulary". (online) http:www//effectivestrategiesforteachingvocabulary.co.id/ Retrieved on 5th March 2014.

Nunan, David, *Practical English Language Teaching.* New York: Prentice-Hall Int, 1991.

Pitoy, Sammy P. Information and Language for Effective Communication. *TEFLIN Journal: a publication on the teaching and learning of English (online),* Vol. 23, No.1. http://www.journal.eflin.org. Retrieved on 2nd March 2013.

Rosenbaum, Catherine. A Word Map for Middle School: A Tool for Effective Vocabulary Instruction. *Journal of Adolescent and Adult Literacy,* Vol. 45 No. l, 2001. www.Jstor.org/stable/40007630. Retrieved on 4th January 2014.

Rohania, Nia, *Teaching Student's Vocabulary through Mapping Word Technique at the Seventh Grade Students of SMPN 1 Mande Cianjur.* STIKIP Siliwangi: 2012. Publikasi.stikipsiliwangi.ac.id. Retrieved on 4th October 2013.