CHAPTER IV

RESEARCH FINDING AND DISCUSSION

This chapter presents the description of data, research findings of the study, hyphothesis testing and the discussion based on the result of the study.

A. The Description of Data

In this research, the researcher presents the vocabulary achievement before and after being taught by using mind mapping *technique*. The researcher did pre-experimental research design by using one group pre-test and post-test with quantitative approach. The fifth graders at SDN I Jeli Karangrejo Tulungagung that consist of 14 students was chosen by the researcher. The researcher used test as research instrument to get the data ,the research used pre-test and post-test developed by the researcher.

The students' scores in pre-test and post-test, there were 14 students as the sample of the research. The was conducted by the researcher before and after using mind mapping technique in teaching vocabulary, from the test they got two score of pre-test and pos test. The lower score in pre-test was 40.00 which is gotten by two students and the higher score was 85 which is gotten by one students. Meanwhile, the lower score in post-test was 55.00 which is gotten by one students and the higher score was 95 which is gotten by one students.

a. The frequencies of pre-test

The pre-test was given before the treatment to students by using mind mapping technique. The pre-test was in the form of multiple choice test. There are 20 questions of multiple choice. The frequency of pre-test can be seen on table :

Table: 4.1 Descriptive Of Pre-Test

Statistics

Pretest

N	Valid	14
	Missing	14
Mean		57.86
Median		50.00
Mode		50
Std. Deviation		15.531

Based on the table 4.1,it can be shown that the students consist of 14 students. It shows that mean score 57.86, meaning that the averages of 14 student's score is 57.86. The median score is 50.00. The mode score is 50.00. and the standard deviation 15.531

b. The frequencies of post-test

The post-test was given after the treatment to students by using mind mapping technique. The pre-test was in the form of multiple choice

test. There are 20 questions of multiple choice. The frequency of pre-test can be seen on table :

Table 4.2 The Descriptive Table Of Post-test

Statistics

Posttest

N	Valid	14
	Missing	14
Mean		77.14
Median		75.00
Mode		75
Std. Deviation		11.044

Based on the table 4.2, it can be shown that the students consist of 14 students. It shows that mean score 77.14, meaning that the averages of 14 student's score is 77.14 The median score is 75.00. The mode score is 75.00. and the standard deviation 11.044.

From the data above which is the form of frequency, the data shows that the score of posttest is higher than the score of pre-test. However to know whether there is significant difference between pre-test and post-test .There are differences data presentations between before taught by using *mind mapping technique* and after taught by using *mind mapping technique*.

The researcher used statistical test using *paired sample t-test* stated by SPSS 16.00 to ensure the effectiveness of using *mind mapping tech nique*on the students' vocabulary achievement. The result is as follows:

Table 4.3. Paired Sample Statistics.

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	57.86	14	15.531	4.151
	Posttest	77.14	14	11.958	3.196

Based on the table 4.3, the data presented are the performance scores of the members of one group which the students who were taught before and after using mind mapping technique in vocabulary mastery . Output paired sample statistics shows that there are mean scores differences between pre-test and post-test. The mean score of pre-test is 57.86 and the mean score of post-test is 77.14. So, the mean score of post-test is higher than the mean score of pre-test. It means that the student's score increase after being taught using mind mapping technique in student vocabulary achievement. The number of subjects or respondents of each sample (N) is 14 students. Meanwhile, standard deviation of pre-test is 15.531 and standard deviation of post-test is 11.958. Mean standard error for pre-test is 4.151, while mean standard error for post-test is 3.196. So, we can conclude that the value increases after being taught using mind mapping technique in vocabulary achievement.

Table 4.4. Paired Sample Correlation.

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	pretest & posttest	14	.593	.025

Based on the table 4.4, output *paired samples correlation* shows the large correlation between samples, where can be seen numeral both correlation is 0.593and numeral significance 0.025. For interpretation of decision based on the result of probability mastery, that is:

a. If the sig> 0.05 then the hypothesis null accepted
b. If the sig< 0.05 then the hypothesis null rejected

The large of numeral significant (0,000) smaller from (0,05). It means that the hypothesis clarify there is no significant different score Using Mind Mapping Technique On The Fifth Graders Vocabulary Mastery At SDN 1 Jeli Karangrejo Tululungagung is rejected. The other word, taught using mind mapping technique is effective on the students' vocabulary mastery

Table 4.5. Paired Sample Test

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Pretest-posttest	-18.214	12.801	3.421	-25.606	-10.823	-5.324	13	.000

Based on table 4.5, output paired samples test shows the result of compare analysis with using T-test. The difference mean score of pre-test and post-test is -18.214. Standard deviation is 12.801, standard mean error is 3.421, the lower different is -25.606, while upper different is -10.823. The result of t_{count} is -5.324 (symbol minus in this matter ignored) with df is 13 and significance (2-tailed) is 0.000.

The significance value is 0.00 and the significance level is 0.05. It means that the significance value is smaller than significance level (0.00 < 0.05). So, the alternative hypothesis (Ha) is accepted and null hypothesis (Ho) is rejected.

Then the researcher gave interpretation to t_{table} .First the researcher considered the df = N-1 with df was 13. At the significance level of 0.05, the score of ttable was 1.770. By comparing the tcount and ttable it was found that t_{count} was bigger than t_{table} = (5.324>1.770). So, the alternative hypothesis (Ha) is accepted and the null hypothesis (Ho) is rejected.

It means that there is significant different of students vocabulary mastery before and after taught by using *mind mapping technique.*

B. Hypothesis Testing

From the data analysis it could be identify that:

1. When the value of $t_{count} > t_{table}$ in *df* = 13 with the significant level 0.05. The alternative hypothesis (H_a) is accepted and the null hypothesis (H_o) is rejected. It means that there is significant different score of student achievement in teaching vocabulary on the fifth grader before and after being taught using *mind mapping technique* .
2. When the value of $t_{count} < t_{table}$ in *df*= 13 with the significant level 0.05. The null hypothesis (H_o) is accepted and the alternative hypothesis (H_a) isrejected. It means that there is significant different score of student achievement in teaching vocabulary on the fifth grader before and after being taught using *mind mapping technique*.The mean of total vocabulary score students before being taught using *mind mapping technique* is (57.86). After getting treatment, the means score of students' vocabulary is (77.14). It means that the students' score is improved.

Based on the statistical calculation using t-test, the researcher gives interpretation to t_{count}. First, considered the *d.f.* with the *d.f.* (14-1=13). checked to the score of "t" at the significant level of 0.05. In fact, with the *d.f.*of (13) and the critical value 0.05 significant t_{table} was (1.770). By

comparing the “t” that she got in calculation t_{count} = (5.324) and the value t_{table} in sig. level of 0.05 is 1.770, it is known that t_{count} is bigger than t_{table} = 5.324 > 1.770.

Because the t_{count} is bigger than t_{table} the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. It means that there is significant different score of students vocabulary mastery on the fifth grade at SDN 1 Jeli Karangrejo Tulungagung ,before and after using *mind mapping technique.* So,the mind mapping technique is effective and suggested to be used to teach vocabulary on the fifth graders at SDN 1 Jeli Karangrejo Tulungagung.

C. Discussion

The purposes of the research are to find out the score of student vocabulary mastery on the fifth graders at SDN 1 Jeli Karangrejo Tulunggung before and after being taught by mind mapping technique and to find out whether there is significant difference scores and of student vocabulary mastery before and after using *mind mapping technique.* This research is conducted in three steps .the first step is giving pre-test to students. Pre-test is give to know the score of student vocabulary mastery before being taught by using *mind mapping technique*. The second steps is giving treatment and applying the *mind mapping technique*. The third steps giving pos-test to know the score of students vocabulary mastery after being taught using *mind mapping technique.*

Based on the statistical calculation using t-test, the researcher gives interpretation to t_{count}. First, considered the *d.f.* with the *d.f.* (14-1= 13). checked to the score of "t" at the significant level of 0.05. In fact, with the *d.f.* of (13) and the critical value 0.05 significant t_{table} was (1.77). By comparing the "t" that she got in calculation t_{count} = (5.324) and the value t_{table} in sig. level of 0.05 is 1.770, it is known that t_{count} is bigger than t_{table} = 5.324 > 1.770.

Because the t_{count} is bigger than t_{table} the null hypothesis (Ho) is rejected and the alternative hypothesis (Ha) is accepted. It means that there is significant different score of students vocabulary mastery on the fifth graders at SDN 1 Jeli Karangrejo Tulungagung ,before and after using mind mapping technique.

Meanwhile according to Buzan (1993:232-233) states that there are some advantages of teaching with mind maps : They are automatically inspire interesting to the student, thus making them more receptive and co-operative in the classroom. They are made lesson and presentation more spontaneous, creative and enjoyable, both for teacher and the students. The teachers note are flexible and adaptable. In this times of rapid change and development, the teacher needs to be able to alter and add to teaching notes quickly and easily. mind mapping only relevant material in a clear and memorable form, the student tend to get better marks in examination. Mind mapping is not just the real fact, but the relationship between those facts, thus giving students a deeper understanding of the subject.

During the process of teaching vocabulary using mind mapping technique, the students are enthusiastic and they are interested. And then the student is confident to answer the question in front of class. And the student is creative if the researcher give the topic and the students develop using mind mapping technique.

Based on the explanation above, teach vocabulary word by using mind mapping technique is good in increasing vocabulary mastery on elementary student. From the result of data analysis, there is any significant different score of student vocabulary before and after they are taught using mind mapping technique. So,the mind mapping technique is effective and suggested to be used to teach vocabulary on the fifth graders at SDN 1 Jeli Karangrejo Tulungagung.