

CHAPTER IV

RESEARCH FINDING AND DISCUSSION

In this chapter, the researcher presents the finding and the discussion of the research. It consists of description of data, the result of normality and homogeneity, hypothesis testing, and discussion.

A. The Description of Data

In this sub chapter, the researcher presents the descriptive statistics of the students' vocabulary achievement before and after being taught by using semantic mapping strategy. The data had been gotten by the researcher after conducting pre-test and post-test. The tests were given to class A of seventh grade students of MTsN 7 Tulungagung which consists of 45 students as a subject of the research. The students' scores of pre-test and post-test can be seen in table 4.1.

Table 4.1 The result of Students' Score in Pre-Test and Post-Test

No	Students' Name	Pre-test (X)	Post-test (Y)	Gained Score (Y-X)
1	ALD	90	100	10
2	ANL	75	85	10
3	BS	60	80	20
4	BDP	55	75	20
5	DM	75	85	10
6	DSS	80	100	20
7	F	75	100	25

8	FAM	50	75	25
9	GBES	55	70	15
10	HH	60	80	20
11	HMW	45	85	40
12	KFE	80	100	20
13	LWR	65	70	5
14	MAN	65	80	15
15	MFAIW	60	75	15
16	MIA	70	80	10
17	MRBU	70	75	15
18	MZS	55	65	10
19	MMA	80	100	20
20	MFZ	70	80	10
21	MLAS	60	90	30
22	MDK	70	90	20
23	MDHA	70	80	10
24	MH	50	75	25
25	MIT	65	75	10
26	MUGF	55	65	10
27	MBM	65	75	10
28	NAR	70	85	15
29	NQM	55	60	5
30	NZF	45	70	25
31	NAR	75	100	25
32	NF	80	90	10
33	NAF	60	70	10
34	NA	55	90	35

35	RCS	85	100	15
36	RM	75	85	10
37	SDU	75	85	10
38	SNA	65	70	5
39	SBN	50	75	25
40	SN	85	90	5
41	SNS	80	85	5
42	TTS	70	100	30
43	UB	75	85	10
44	YRP	65	75	10
45	YR	75	85	10

Based on the table 4.1, the lowest score of the students in pre-test was 45 and the highest one in pre-test was 90. After the researcher gave the treatment by using semantic mapping, then the researcher gave post-test to students to know whether there was different score or not. Based on the table above, the lowest score of the students in post-test was 60 and the highest one was 100. It means that the students' score in post-test was higher than the students' score in pre-test.

1. Computation Result of the Students' Score Before being Taught by Using Semantic Mapping Strategy (Pre-Test)

The number of item in pre-test was 20 questions were administered for 45 students. This pre-test was done before teaching vocabulary by using semantic mapping strategy to know the students' vocabulary achievement before they were given the treatment. The result of pre-test based on processing

in SPSS 24.0 version software. The descriptive statistic of pre-test score consisted of mean (table 4.2), the frequency distribution and percentage of pre-test (table 4.3), and histogram of pre-test (figure 4.1), those can be seen as below:

Table 4.2 The Descriptive Statistic of Pre-test Score

Statistics

Pretest

N	Valid	45
	Missing	0
Mean		66.89
Std. Error of Mean		1.676
Median		70.00
Mode		75
Std. Deviation		11.246
Variance		126.465
Range		45
Minimum		45
Maximum		90
Sum		3010

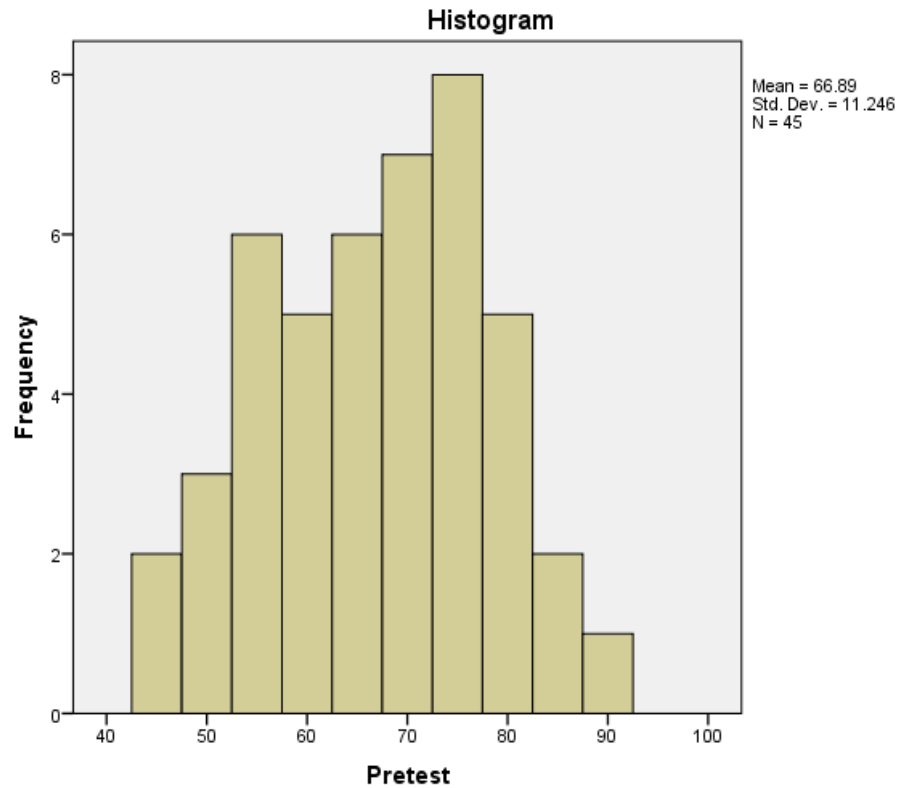
Descriptive statistic is functioning to describe the condition of certain group. In this research, the group was intended to seventh A students MTsN 7 Tulungagung. The table 4.2 above showed that there were 45 test takers. The mean score was 66.89. The mean 66.89 meant that the average of 45 students' score was 66.89. Then, the half number of data sample which determined as

median score was 70. Meanwhile, the mode score showed the most frequently appeared number, and the most appeared number was 75. In addition, the minimum score was 45 and the maximum score was 90. Then to know the number of score appeared in pre-test, the researcher presents frequency distribution and the histogram. It can be seen in table 4.3 and figure 4.1 below:

Table 4.3 Frequency Distribution and Percentage of Pre-test

Pretest					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	45	2	4.4	4.4	4.4
	50	3	6.7	6.7	11.1
	55	6	13.3	13.3	24.4
	60	5	11.1	11.1	35.6
	65	6	13.3	13.3	48.9
	70	7	15.6	15.6	64.4
	75	8	17.8	17.8	82.2
	80	5	11.1	11.1	93.3
	85	2	4.4	4.4	97.8
	90	1	2.2	2.2	100.0
	Total	45	100.0	100.0	

Figure 4.1 Histogram of Pre-test



As can be seen from table 4.3 and further explained by figure 4.1, it showed the numbers that describe the categorizing based on frequency distribution by considering on qualification of the scoring rubric.

- a. There are 11 students who got score less than 60, it means that the students' vocabulary achievement was fail. It needed much improvement.
- b. There are 11 who got score between 60 – 69, it means that the students' vocabulary achievement was still fair. It needed much improvement.

- c. There are 15 students who got score between 70 – 79, it means that the students' vocabulary achievement was good. However, it still needed the improvement.
- d. There are 7 students who got score between 80 – 89, it means that the students' vocabulary achievement was very good. But, it still could be improved.
- e. Then, there is only 1 student who got score 90, it means that the students' vocabulary achievement was excellent.

Based on the result above, it has been known that many students still seemed difficult to master the vocabulary. Then after getting the treatment by using semantic mapping, the students showed good improvement in their vocabulary mastery. Table 4.4 and figure 4.2 represent the computation result of post-test as follow:

2. Computation Result of the Students' Score After being Taught by Using Semantic Mapping Strategy (Post-Test)

The number of item in post-test was 20 questions were administered for 45 students. This post-test was done after teaching vocabulary by using semantic mapping strategy to know the students' vocabulary achievement after they were given the treatment. The result of post-test based on processing in SPSS 24.0 version software. The descriptive statistic of post-test score consisted of mean (table 4.4), the frequency distribution and percentage of

post-test (table 4.5), and histogram of post-test (figure 4.2), those can be seen as below:

Table 4.4 The Descriptive Statistic of Post-test Score

Statistics		
Posttest		
N	Valid	45
	Missing	0
Mean		82.44
Std. Error of Mean		1.625
Median		80.00
Mode		75
Std. Deviation		10.904
Variance		118.889
Range		40
Minimum		60
Maximum		100
Sum		3710

Descriptive statistic is functioning to describe the condition of certain group. In this research, the group was intended to seventh A students MTsN 7 Tulungagung. The table 4.4 above showed that there were 45 test takers. The mean score was 82.44. The mean 82.44 meant that the average of 45 students' score was 82.44. Then, the half number of data sample which determined as median score was 80. Meanwhile, the mode score showed the most frequently

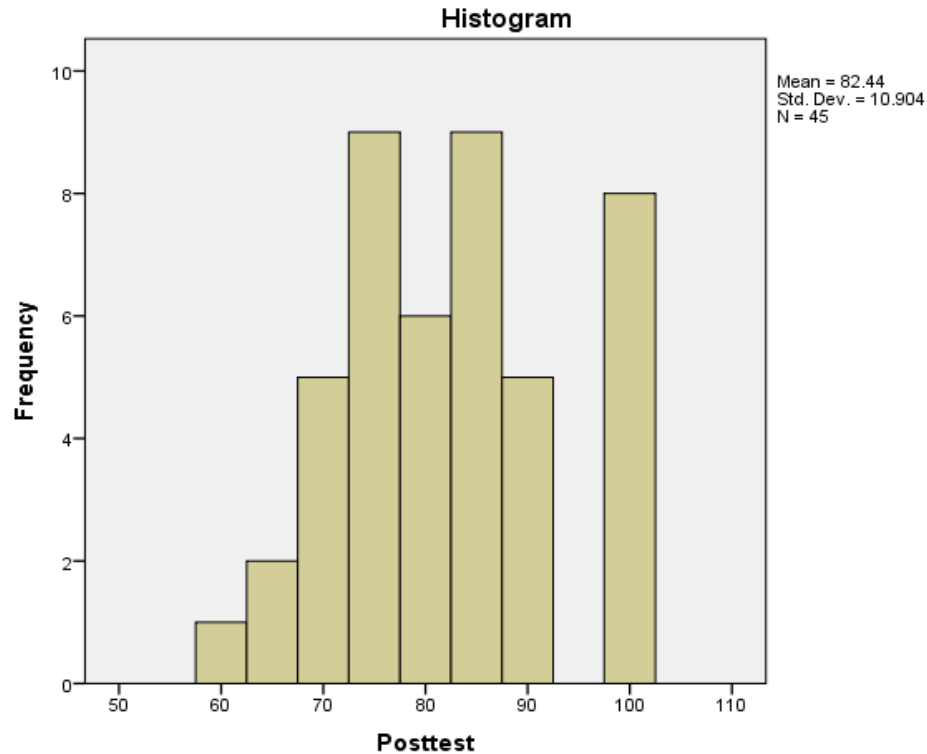
appeared number, and the most appeared number was 75. In addition, the minimum score was 60 and the maximum score was 100. Then to know the number of score appeared in pre-test, the researcher presents frequency distribution and the histogram. It can be seen in table 4.5 and figure 4.2 below:

Table 4.5 Frequency Distribution and Percentage of Post-test

Posttest

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 60	1	2.2	2.2	2.2
65	2	4.4	4.4	6.7
70	5	11.1	11.1	17.8
75	9	20.0	20.0	37.8
80	6	13.3	13.3	51.1
85	9	20.0	20.0	71.1
90	5	11.1	11.1	82.2
100	8	17.8	17.8	100.0
Total	45	100.0	100.0	

Figure 4.2 Histogram of Post-test



As can be seen from table 4.3 and further explained by figure 4.1, it showed the numbers that describe the categorizing based on frequency distribution by considering on qualification of the scoring rubric.

- a. There are 3 who got score between 60 – 69, it means that the students' vocabulary achievement was still fair.
- b. There are 14 students who got score between 70 – 79, it means that the students' vocabulary achievement was good.
- c. There are 15 students who got score between 80 – 89, it means that the students' vocabulary achievement was very good.

- d. Then, there are 13 students who got score between 90 – 100, it means that the students' vocabulary achievement was excellent.

B. The Result of Normality and Homogeneity Testing

In this sub chapter, the researcher presents and discusses the result of normality and homogeneity testing by using SPSS 24.0 version. Calculating normality is used to know whether the data has been normal distributed or not. Meanwhile, calculating homogeneity is used to know whether the sample of data is homogen or heterogen. The result of normality and homogeneity testing are presented below.

1. The Result of Normality Testing

The normality of both pre-test and post-test was measured by SPSS 24.0 version using the formula of One Sample Kolmogorov-Smirnov Test. The result can be seen in the table 4.6 below:

Table 4.6 Normality Result

One-Sample Kolmogorov-Smirnov Test

		Pretest	Posttest
N		45	45
Normal Parameters ^{ab}	Mean	66.89	82.44
	Std. Deviation	11.246	10.904
	Absolute	.120	.130
Most Extreme Differences	Positive	.099	.130
	Negative	-.120	-.124
Test Statistic		.120	.130
Asymp. Sig. (2-tailed)		.103 ^c	.053 ^c

a. Test distribution is Normal.

Based on the table above, it can be seen that the significance value of pre-test was 0.103, it was bigger than 0.050. It means that the data distribution of pre-test was normal. Then the significance value of post-test was 0.053, it was bigger than 0.050. It means that the data distribution of post-test was also normal. It can be concluded that both of the data (pre-test and post-test) were normal distributions.

2. The Result of Homogeneity Testing

Homogeneity is conducted after ensuring whether the data has been normal distributed. The purpose of calculating homogeneity is to know whether the data includes to homogeneous or heterogeneous data. In calculating the data, the researcher used SPSS 24.0 version using formula Homogeneity of Levene Statistic. The result can be seen as below:

Table 4.7 Homogeneity Result (Pre-test)

Test of Homogeneity of Variances

Pretest

Levene Statistic	df1	df2	Sig.
1.322	6	37	.272

Table 4.8 Homogeneity Result (Post-test)

Test of Homogeneity of Variances

Posttest

Levene Statistic	df1	df2	Sig.
1.398	8	35	.232

The description of the homogeneity data pre-test and post-test showed the significance value. First, the significance value of pre-test was 0.272, it was bigger than 0.050, means that the data of pre-test was homogen. Second, the significance value of post-test was 0.232, it was bigger than 0.050, means that the data of post-test was also homogen. When the data were normal distribution and homogen, next the researcher test the hypothesis, in testing the hypothesis the researcher used parametric testing in term of *Paired Sample T Test* by using SPSS 24.0 version. The result of hypothesis testing can be seen as below:

C. The Result of Hypothesis Testing

Table 4.9 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	-15.556	8.609	1.283	-18.142	-12.969	-12.121	44	.000

This research is conducted to know whether there is significant difference in students' vocabulary mastery in descriptive text of seventh grade students in MTsN 7 Tulungagung in academic year 2018/2019 before and after being taught by using Semantic Mapping strategy. To analyze the finding data, the researcher uses Paired

Sample Test by using SPSS 24.0 version. The hypothesis of this research is stated as follow:

1. When the significant value $>$ significant level, the null hypothesis (H_0) is accepted and the alternative hypothesis (H_a) is rejected. It means there is no significant difference score on the students' vocabulary mastery before and after being taught by using Semantic Mapping Strategy.
2. When the significant value $<$ significant level, the alternative (H_a) is accepted and the null hypothesis (H_0) is rejected. It means there is significant difference score on the students' vocabulary mastery in descriptive text before and after being taught by using Semantic Mapping Strategy.

Based on the table 4.9 above, the significant value of this research is 0.000, standard significant is 0.050. It means the significant value is smaller than significant level ($0.000 < 0.050$). When the significant value ($0.000 <$ significant level (0.050), it can be concluded that the alternative hypothesis (H_a) was accepted and the null hypothesis (H_0) was rejected. It means that there is any significant different score on students' vocabulary mastery before and after being taught by using Semantic Mapping Strategy.

D. Discussion

In this research, the researcher only used one sample as a subject for the research, the researcher used class A of seventh grade students of MTsN 7 Tulungagung which consist of 45 students. It has been chosen by purposive sampling technique in term suggestion by some eligible people in the school. The

purpose of this research is to find out whether there is any significant different score on the students' vocabulary mastery before and after being taught by using semantic mapping strategy. This research is done in three steps. The first is giving pre-test to students, its purpose is to know the score of the students' vocabulary mastery before given the treatment by applying semantic mapping strategy. The second steps are giving the treatment by applying semantic mapping strategy. The third steps are giving post-test to know the score of the students' vocabulary mastery after given the treatment by applying semantic mapping strategy.

To know whether this strategy is effective or not, the researcher used the score of students' pre-test and post-test then calculate both of the tests into SPSS 24.0 version software. Based on the result of statistical calculation, the use of semantic mapping strategy is effective toward the students' vocabulary mastery it was proved in hypothesis testing by the gained significance value which less than 0.050, when the significance value less than 0.050, thus the alternative hypothesis (H_a) is accepted and the null hypothesis (H_0) is rejected. It means there is any significant difference score on students' vocabulary mastery before and after being taught by using semantic mapping strategy. The difference can be seen in the result of pre-test and post-test scores from the mean of pre-test 66.89 becomes 82.44 in post-test.

Thus finding result by using semantic mapping strategy is effective to teach vocabulary. Previously the students get the difficulty in mastering and understanding the meaning of vocabulary, after taught by using Semantic Mapping

strategy the students can understand the meaning and master the vocabulary better than before. Then, by using Semantic Mapping strategy, the students more interested and enthusiasm and they felt more enjoyed during the learning activity. This strategy also made the students participated more actively in the learning activity because this strategy is student centered.

This is also strongly related to some advantages of Semantic Mapping strategy in teaching vocabulary, Indriarti (2014:79) stated that using semantic mapping strategy in teaching vocabulary can help the students to remember the words easily because it organized in some categories of word. Then, it can decrease students' boredom in learning vocabulary, helping the students become active participants in the class because they can have their ideas represented. This strategy also increasing the students' motivation to learn new vocabulary because of the attractiveness of semantic mapping strategy in teaching vocabulary.

Regarding from the result, it also strengthened by previous studies, the study by Trisnawati (2018) with entitled "Increasing Vocabulary Mastery Through Semantic Mapping Strategy at the Eight Grade of SMP the Darul 'Ulum Sekampung". The result showed that by using semantic mapping can increase the students' vocabulary mastery. Semantic mapping strategy made the students be more confident to active in the classroom activity. Then, semantic mapping strategy could make the students collected new vocabulary, so the students could be easier to remember new vocabulary. Next, the students were interested in studying English, especially in vocabulary. In addition, Vadilah (2011) with the entitled

“Enriching Students’ Vocabulary Through Semantic Mapping (A Classroom Action Research in the First Year of Electro B Class of Triguna Utama Vocational School Ciputat)”, by using Semantic Mapping the students’ vocabulary was enriched and the students were interested and motivated in teaching-learning process. The last the study by Rahmah (2017) with the entitled *“The Effectiveness of Semantic Mapping on Students’ Vocabulary Achievement (A Quasi-Experimental Study at the Eight Grade Students of MTs Islamiyah Ciputat Tangerang Selatan in Academic Year 2017/2018)”*, Semantic Mapping can increase students’ vocabulary achievement.

Therefore, this research was proved and strengthened the previous studies that Semantic Mapping was really effective to teach vocabulary and could be used as the alternative strategy to teach vocabulary.