

CHAPTER IV

RESEARCH FINDING AND DISCUSSION

In this chapter, the researcher presented the data of the research finding and the analyzed. In the research finding, the researcher showed all of the data which were collected during the research. The data include in try-out test, pre-test and post test. First, the researcher was analyzing the try- out of instrument to find the validity and reliability of the instrument test, whether the instrument of test is ready to use in pre-test and post test or not. Second, the researcher was analyzing the pretest and post test result from the experimental class and control class, t-test statistical and discussion of the research findings. The researcher gave pre-test and post test to know whether it is effective or not use Fly Swatter Game technique to improve students' vocabulary mastery. In other words, the researcher wanted to know the significant difference between before and after students were taught by using Fly Swatter Game.

The researcher took two classes, VII H as experimental class that consist of 32 students and VII E as control class that consist of 32 students. There were 64 students of MTs Darul Ulum Purwogondo Kalinyamatan Jepara, who were given pre test and post test.

4.1 Try-out Test Analysis

Trying out of instrument is needed to know the the validity and reliability of the test. In this analysis the researcher describes of finding out the

validity and reliability before used in the pretest and post test. The trying out test were conducted on August 6th, 2020 in VII I class of MTs Darul Ulum Purwogondo Kalinyamatan Jepara. There were 20 students as participants. There were 50 questions of multiple choices that given to the students.

4.1.1 The Validity of Try-out Test

Before the researcher calculated the validity of the test, the researcher consulted the significant level 5% (0,05) from 20 participants was 0,444.

The item test was valid if $R_{\text{count}} > R_{\text{table}}$

The item test was invalid if $R_{\text{count}} < R_{\text{table}}$

To calculated validity of try out test, the researcher used microsoft excel and SPSS 25. There were 23 items valid and 27 items were invalid. The researcher determined the valid questions and invalid questions the table below, as follow :

Table 4.1 Validity of Try-out Test

Criteria	Numbers of Items	Total Items
Valid	5,7,9,10,13,15,21,22,23,25,27,28,29,38, 39,42,43,44,45,47,48,49,50	23 items
Invalid	1,2,3,4,6,8,11,12,14,16,17,18,19,20,24, 26,30,31,32,33,34,35,36,37,40,41,46	27 items

From the calculation above, it showed that there were 23 items were valid but only 20 items that was used for pretest and post test. There were 27 items were invalid that was not used for pretest and post test. The complete result of try-out test validity can be found in the appendix.

4.1.2 The Reliability of Try-out Test

The researcher calculated the reliability after measuring the validity of the test. According to Sugiyono (2018), Reliability is consistency of measurement. The research instrument has high reliability if it can produce consistent result. Beside high validity, a good test should high reliability too. To calculated reliability of the test, the researcher used SPSS 25.

The instrument is reliable if Cronbach's Alpha > 0.06

The istrument is not reliable of Cronbach's Alpha < 0.06

Table 4.2 Reliability of Try-out Test

Case Processing Summary			
		N	%
Cases	Valid	19	95,0
	Excluded ^a	1	5,0
	Total	20	100,0
a. Listwise deletion based on all variables in the procedure.			

Reliability Statistics	
Cronbach's Alpha	N of Items
,904	50

From the calculation above, showed that in Cronbach's Alpha column was 0,904. It means that the instrument of the test is reliable. It can be seen from Cronbach's Alpha column $0,904 > 0,60$.

4.2 Pre-test Score

In this part, the researcher showed the data of pre-test score of experimental class and control class. There were 32 students in experimental class and 32 students in the control class.

Table 4.3 Pre-test Score of Experimental Class and Control Class

Experimental Class			Control Class		
No	Students' Code	Score	No	Students' Code	Score
1	H1	45	1	E1	45
2	H2	60	2	E2	50
3	H3	35	3	E3	10
4	H4	75	4	E4	75
5	H5	65	5	E5	50
6	H6	45	6	E6	60
7	H7	50	7	E7	25
8	H8	55	8	E8	30
9	H9	20	9	E9	65
10	H10	40	10	E10	45
11	H11	65	11	E11	30

12	H12	40	12	E12	70
13	H13	40	13	E13	20
14	H14	25	14	E14	60
15	H15	45	15	E155	10
16	H16	10	16	E16	40
17	H17	55	17	E17	50
18	H18	70	18	E18	15
19	H19	50	19	E19	60
20	H20	15	20	E20	75
21	H21	60	21	E21	65
22	H22	60	22	E22	70
23	H23	40	23	E23	10
24	H24	70	24	E24	40
25	H25	15	25	E25	45
26	H26	65	26	E26	20
27	H27	60	27	E27	35
28	H28	55	28	E28	60
29	H29	30	29	E29	15
30	H30	10	30	E30	35
31	H31	65	31	E31	60
32	H32	35	32	E32	45
Total		1470	Total		1385
Mean		45,93	Mean		43,28

Based on the table of pre-test above, we can see that in experimental class, the highest score was 75 while the lowest score was 10. Besides, in the control class the highest pre-test score was 75 and the lowest pre-test score was 10. Moreover, the average score or means of experimental class was 45,93. Then, the means score of control class was 43,28.

From the students' pre-test mean score it can be assumed that students from the experimental class performed better than students' from control class in the pre-test, but the assumption is not sure significant yet before it is tested by using normality test, homogeneity test and t-test.

Table 4.4 Result of the Normality Test in Pre-test

The Normality Test of Pre-test in the Experimental Class and Control Class

Tests of Normality							
	Kelas	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Hasil Belajar	Kelas H	,124	32	,200 [*]	,942	32	,085
	kelas E	,139	32	,122	,944	32	,097
*. This is a lower bound of the true significance.							
a. Lilliefors Significance Correction							

If significant score (Sig.) > 0,05 = normal distribution

If significant score (Sig.) < 0,05 = not normal distribution

Based on the output from SPSS above is known that the significance value from two classes pre-test were 0,085 ($0,085 > 0,05$) in class H and 0,097 ($0,097 > 0,05$) in class E. The calculation showed that the both of significant score was higher than 0,05. it assumed that the both of students' score in pre-test was normal distribution. It meant that H_0 is accepted and H_a is rejected and the the data is in normal distribution.

Table 4.5 Result of the Homogeneity Test in Pre-test

The Homogeneity Test of Pre-test in the Experimental Class and Control Class

To know the homogeneity, the researcher used *One Way Anova* test with SPSS 25.

The result can be seen below :

Test of Homogeneity of Variances					
		Levene Statistic	df1	df2	Sig.
Hasil Belajar	Based on Mean	,379	1	62	,540
	Based on Median	,270	1	62	,605
	Based on Median and with adjusted df	,270	1	61,604	,605
	Based on trimmed mean	,373	1	62	,544

The variances of two classes will be told based on this decision.

If significant score (Sig.) $> 0,05$ = homogeny

If significant score (Sig.) $< 0,05$ = not homogeny

Based on the output from SPSS above is known that the significance score was higher than 0,05. It assumed that the variances are homogeny ($0,540 > 0,05$). It meant that H_0 was accepted and the students' score was homogenous.

Table 4.6 Result of T-test in Pre-test

The T-test of Pre-test in the Experimental Class and the Control Class

Group Statistics					
	Kelas	N	Mean	Std. Deviation	Std. Error Mean
Hasil Belajar	Pretest H	32	45,94	18,641	3,295
	Pretest E	32	43,28	20,305	3,589

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Hasil Belajar	Equal variances assumed	,379	,540	,545	62	,588	2,656	4,873	-7,084	12,396
	Equal variances not assumed			,545	61,552	,588	2,656	4,873	-7,085	12,398

The table above described the t-test analysis using SPSS 25 of students' pre-test score in the experimental class and the control class. The table showed the mean score of experimental class was 45,94 and the mean score of control class was 43,28. The standar deviation of experimental class was 18,641 and the standard deviation of control class was 20,305. It was known from the mean score both of the class, the experimental class was higher than the control class. In this calculation of pre-test score in the experimental class and control class, the Sig. (2-tailed) was 0,588. It was indicated that there was no significant between experimental class and control class. In conclusion, both of those had the same level of vocabulary achievement.

Here is the note :

If Sig.(2-tailed) > 0,05 = there is no significant

If Sig.(2-tailed) < 0,05 = there is significant

It meant that the result from this calculation above was Sig.(2-tailed) > 0,05 (0,588 > 0,05).

4.3 Post test Score

In this part, the researcher showed the data of pre-test score of experimental class and control class after got treatment . There were 32 students in experimental class and 32 students in the control class.

Table 4.7 Post Test Score of Experimental Class and Control Class

Post Test Score of Experimental Class and Control Class

Experimental Class			Control Class		
No	Students' Code	Score	No	Students' Code	Score
1	H1	70	1	E1	70
2	H2	90	2	E2	60
3	H3	60	3	E3	60
4	H4	80	4	E4	65
5	H5	85	5	E5	60
6	H6	70	6	E6	75
7	H7	60	7	E7	65
8	H8	65	8	E8	60
9	H9	75	9	E9	80
10	H10	80	10	E10	60
11	H11	75	11	E11	65
12	H12	60	12	E12	70
13	H13	70	13	E13	55
14	H14	75	14	E14	70
15	H15	80	15	E155	65

16	H16	60	16	E16	65
17	H17	85	17	E17	65
18	H18	75	18	E18	60
19	H19	70	19	E19	75
20	H20	60	20	E20	75
21	H21	85	21	E21	70
22	H22	60	22	E22	70
23	H23	70	23	E23	50
24	H24	80	24	E24	55
25	H25	55	25	E25	80
26	H26	90	26	E26	40
27	H27	80	27	E27	60
28	H28	75	28	E28	65
29	H29	60	29	E29	55
30	H30	65	30	E30	70
31	H31	70	31	E31	60
32	H32	80	32	E32	70
Total		2315	Total		2065
Mean		72,34375	Mean		64,53125

Based on the table of post test above, we can see that in experimental class, the highest score was 90 while the lowest score was 55. Besides, in the control class the highest pre-test score was 80 and the lowest pre-test score was 40. Moreover, the average score or means of experimental class was 72,34375. Then, the means score of control class was 64,531. The result showed that there was an improvement in post test result than pre-test. In order to prove that the post test had significant different between experimental class and control class, it could be seen below:

Table 4.8 Result of the Normality Test in Post-test

The Normality Test of Post -test in the Experimental Class and Control Class

Tests of Normality							
	Kelas	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	Df	Sig.	Statistic	df	Sig.
Hasil Post Test	Post test H	,145	32	,084	,940	32	,075
	Post test E	,142	32	,100	,951	32	,150

a. Lilliefors Significance Correction

If significant score (Sig.) > 0,05 = normal distribution

If significant score (Sig.) < 0,05 = not normal distribution

Based on the output from SPSS above is known that the significance value from two classes pre-test were 0,075 ($0,075 > 0,05$) in class H and 0,150 ($0,150 > 0,05$) in class E. The calculation showed that the both of significant score was higher than 0,05. it assumed that the both of students' score in post-test was normal distribution. It meant that H_0 is accepted and H_a is rejected and the the data is in normal distribution.

Table 4.9 Result of the Homogeneity Test in Post-test

The Homogeneity Test of Post test in the Experimental Class and Control Class

Test of Homogeneity of Variances					
		Levene Statistic	df1	df2	Sig.
Hasil Post Test	Based on Mean	1,839	1	62	,180
	Based on Median	1,973	1	62	,165
	Based on Median and with adjusted df	1,973	1	61,519	,165
	Based on trimmed mean	1,925	1	62	,170

The variances of two classes will be told based on this decision.

If significant score (Sig.) $> 0,05$ = homogeny

If significant score (Sig.) $< 0,05$ = not homogeny

Based on the output from SPSS above is known that the significance score was higher than 0,05. It assumed that the variances are homogeny (0,180 $> 0,05$). It meant that H_0 was accepted and the students' score was homogenous.

Table 4.10 Result of T-test in Post test

The T-test of Post test in the Experimental Class and the Control Class

Group Statistics											
		Kelas	N	Mean	Std. Deviation	Std. Error Mean					
Hasil Post Test	Post test H		32	72,34	9,836	1,739					
	Post test E		32	64,53	8,553	1,512					
Independent Samples Test											
		Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper	
Hasil Post Test	Equal variances assumed	1,839	,180	3,390	62	,001	7,813	2,304	3,206	12,419	
	Equal variances not assumed			3,390	60,828	,001	7,813	2,304	3,205	12,420	

The table above described the t-test analysis using SPSS 25 of students' post test score in the experimental class and the control class. The table showed the

mean score of experimental class was 72,34 and the mean score of control class was 64,53. The standar deviation of experimental class was 9,836 and the standard deviation of control class was 8,553. It was known from the mean score both of the class, the experimental class was higher than the control class. In this calculation of post test score in the experimental class and control class, the Sig. (2-tailed) was 0,001. It was showed that Sig. (2-tailed) was lower than 0.05 ($0,001 < 0,05$). It was indicated that there is significant between experimental class and control class in post test score. In conclusion, it means that there was significant difference of the vocabulary achivement between students taught using Fly Swatter Game technique and those taught by using demonstration method. Moreover, it proved that teaching vocabulary by using Fly Swatter Game is more effective.

4.4 Testing of the Hypothesis

In this part, the researcher described the interpretation of the research finding and summarized the hypothesis. The research was to answer the problem statement whether the use of Fly Swatter Game was effective to improve students' vocabulary mastery at the seventh grade of Mts Darul Ulum Purwogondo or not. In the previous part, the researcher stated two hypothesis to answer the problem statement there were Alternative Hypothesis (H_a) and the Null Hypothesis (H_o) as follow:

a. Alternative Hypothesis (Ha)

There was a significant difference of the students' vocabulary mastery between students who were taught by using fly swatter game and students who were not taught by using fly swatter game.

b. Null Hypothesis (Ho)

There was no a significant difference of the students' vocabulary mastery between students who were taught by using fly swatter game and students who were not taught by using fly swatter game.

To know the hypothesis, the data obtained in the experimental class and control class were calculated by using t-test formula with assumption as follow:

1. If Sig. (2-tailed) > 0,05, the Null Hypothesis (Ho) is accepted and the Alternative Hypothesis (Ha) is rejected. It showed that fly swatter game was not effective to improve students' vocabulary mastery.
2. If Sig. (2-tailed) < 0,05, the Null Hypothesis (Ho) is rejected and the Alternative Hypothesis (Ha) is accepted. It showed that fly swatter game was effective to improve students' vocabulary mastery.

The researcher calculated and analyzed the t-test and got the result. The result showed that the post test score of experimental class was higher than post test score of the control class ($0,001 < 0,05$). Thus, the Null Hypothesis (Ho) is rejected and the Alternative Hypothesis (Ha) is accepted. In other words, teaching vocabulary for seventh grade of MTs Darul Ulum Purwogondo by using Fly Swatter Game is effective.

4.5 Discussion

Based on the result of the students' vocabulary score, it was found that the students' vocabulary score was improved. Most of the students got good score in the post test after got treatment. It showed that use fly swatter game to teaching vocabulary was effective in improving students' vocabulary mastery. Based on Silaban & Andriani (2017:37), fly swatter game was a game where the students have to get a word in the whiteboard by using teacher's instruction. This game helped the students to improve their vocabulary mastery and could be a very useful tool in teaching learning process. In this game, the students were encouraged to be creative and active in findings the words based on the certain clues. This game was interesting and could changed untrue judgment that learning English was boring and complicated.

The researcher conducted the research at MTs Darul Ulum Purwogondo Kalinyamatan Jepara and quasi experimental research was the design of the research. The researcher used two classes of the seventh grade students. They were class H consisted of 32 students as experimental class and class E consisted of 32 students as control class. The totally was 64 students.

The researcher conducted the research for two meetings in each class. The researcher gave a pre-test in both of the classes, experimental class and the control class to measure their vocabulary before conducting treatment. The means score of pre-test were 45,93 in experimental class and 43,28 in the control class. From the result of pre-test found that there is no significant difference between experimental class and control class t-test was Sig.(2-tailed)

$> 0,05$ ($0,588 > 0,05$). After gave the pre-test, the researcher applied a treatment to the experimental class by using fly swatter game and control class by using demonstration method in two meetings on August, 10th and 15th 2020. When the students taught using fly swatter game in experimental, the students felt enjoy and excited in teaching learning procees, because they felt playing. According to Rezqiah (2013:237), fly swatter game is an exciting activity in the class, and the students will feel more enjoyable and they will get addicted to the game. The students played the game based on the teachers' instruction. They pronounced the word, spelled the word and mentioned the meaning of the word. On the other hand, students that taught by using demonstration method felt bored with the material because they do not interested.

The result of improving students' vocabulary mastery could be seen from pre-test and post test that had given by researcher from experimental class and control class. Teaching vocabulary by using fly swatter game was effective. Based on the result of post test. The means score of post test was improve from 45,93 become 72,34 in experimental class and 43,28 become 64,53 in control class. It is assumed that teaching by using fly swatter game was effective. In the post test result was found that there was significant difference between experimental class and control class t-test was $0,001 < 0,05$. It was showed that Sig. (2-tailed) was lower than 0.05 ($0,001 < 0,05$). Therefore, based on the hypothesis testing, H_a is accepted and the H_o is rejected, the theory is verified. It meant that there was significance different score in the students' vocabulary mastery at seventh grade of Mts Darul Ulum Purwogondo in the academic year 2020/2021. The detail of the result score can be seen as follows :

Table 4.11

The Improvement of the Students' Score

Class	The mean score of Pre-test	The mean score of Post test
Experimental Class	45,93	72,34
Control Class	43,28	64,53
T-test	0,588	0,001
Sig (2-tailed)	(0,588 > 0,05)	(0,001 < 0,05)
	There was no significance different score between experimental class and control class	There was significance different score in the students' vocabulary mastery between experimental class and control class after got a treatment

The researcher found in the implementation of fly swatter game that the students became more enthusiastic and always had spirit of competition when they played the game in the teaching learning process. According to Derakhshan & khatir (2015:40) Through the game, the learners will not feel that they are studying but playing. Students will feel more enjoyable and they will get many new words from the game. Fly swatter game can also change untrue judgment that learning English is difficult (Rezkihah, 2013).