CHAPTER IV

FINDINGS AND DISCUSSION

In this chapter, the researcher presents findings which have been collected during the research, hypothesis testing and discussions of the research findings.

A. The Description of Data

The aim of the research was to obtain whether there was a significant effect of students' vocabulary mastery taught by using Stop Motion Animation as media at first grade of MTsN 5 Tulungagung in academic year 2018/2019. The data of this research were taken from the test score.

The data were the students' score of test improvement from pre-test to post-test of both contol and experimental classes. Before giving post-test, the researcher gave pre-test to all of the samples in both classes. The effectiveness can be seen from the significant different score of students' vocabulary mastery taught and without taught by using Stop Motion Animation as media.

To know the students's vocabulary mastery whether it was good or not, the researcher gave category as follows: (See table 4.1)

No.	Range of Score	Criteria
1.	90-100	Very Good
2.	70-89	Good
3.	50-69	Fair
4.	30-49	Poor
5.	0-29	Very Poor

1. The Data of Experimental Class

After conducting pre-test and post-test of control class, the researcher obtained the data. The data are as follows:

Table 4.2 Students score before and after being taught using Stop Motion Animation

NO.	INITIAL NAME	PRE-TEST	POST-TEST
1.	AIA	76	100
2.	AFA	64	80
3.	AFR	64	80
4.	AAA	72	76
5.	AZF	76	84
6.	ADF	84	100
7.	ADR	60	96
8.	ADA	96	100
9.	AF	68	88
10.	AA	80	80
11.	DAM	80	84
12.	DUM	56	72
13.	DP	48	88
14.	EPW	80	92
15.	EP	56	76
16.	FZ	72	92
17.	FTR	48	72
18.	HMS	52	68
19.	KRA	80	88
20.	LKL	80	88
21.	MKA	80	88
22.	MDBS	76	76
23.	MS	80	72
24.	MBF	76	72
25.	MSQ	84	88
26.	NAN	64	92
27.	NIM	60	76
28.	RAB	64	66
29.	RAY	64	88

30.	RIP	68	88
31.	SPR	60	92
32.	YW	68	84
33.	ZMP	76	92
34.	AWW	72	84
35.	APR	96	96
36.	AEA	76	92
37.	AFW	88	84
38.	CB	80	96
39.	DSN	60	84
40.	DEP	72	80
41.	DRN	80	84

Based on the table 4.2, there were 41 students as sample of the research. The descriptive statistic of experimental class is as follow:

a. Pre-Test of Experimental Class

The researcher used SPSS 18.0 version to know the descriptive statistic and the the frequency of students' pre-test in experimental class. The frequency divided into five criterions: very good, good, fair, poor and very poor (see table 4.1). the result of the calculation is as follows:

Table 4.3 Descriptive Statistic of Pre-Test

Statistics

Pretest

N	Valid	41
	Missing	0
Mean		71.61
Std. Error of Mean		1.809
Median		72.00
Mode		80
Std. Deviation		11.586
Variance		134.244
Range		48
Minimum		48
Maximum		96
Sum		2936
Percentiles	25	64.00
	50	72.00
	75	80.00

Based on the table 4.3 above, it showed that the mean of pre-test was 71.61, the median was 72.00, the mode was 80, the standart deviation was 11.586, the range was 48, the minimum score of pre-test was 48, the maximum score was 96. Then, the summary of pre-test was 2936.

Table 4.4 The Frequency of Students' Score Before Taught by using Stop Motion Animation

Pretest

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	48	2	4.9	4.9	4.9
	52	1	2.4	2.4	7.3
	56	2	4.9	4.9	12.2
	60	4	9.8	9.8	22.0
	64	5	12.2	12.2	34.1
	68	3	7.3	7.3	41.5
	72	4	9.8	9.8	51.2
	76	6	14.6	14.6	65.9
	80	9	22.0	22.0	87.8
	84	2	4.9	4.9	92.7
	88	1	2.4	2.4	95.1
	96	2	4.9	4.9	100.0
	Total	41	100.0	100.0	

From the table 4.4, the frequency of pre-test score of experimental class after being distributed there are 2 students getting score between 30-49, which means that students' vocabulary mastery was poor, 15 students getting score between 50-69 which means that students's vocabulary mastery was fair. Then, 22 students getting score between 70-89 which means that students' vocabulary mastery was good, 2 students getting score between 90-100, means that students' vocabulary mastery was very good.

There were 2 students got score 48 (4.9%), 1 student got score 52 (2.4%), 2 students got score 56 (4.9%), 4 students got score 60 (9.8%), 5

students got score 64 (12.2%), 3 students got score 68 (7.3%), 4 students got score 72 (9.8%), 6 students score 76 (14.6%), 9 students got score 80 (22.0%), 2 students got score 84 (4.9%), 1 students got score 88 (2.4%), and 2 students got score 96 (4.9%). The highest frequency was in score 80 (9 students).

b. Post-test of Experimental class

The researcher used SPSS 18.0 version to know the descriptive statistic and the frequency of students' post-test in experimental class. The frequency divided into five creiterions: very good, good, fair, poor and very poor (see table 4.1). The result of the calculation is as follows:

Table 4.5 Descriptive Statistic of Post-Test

Statistics

Posttest

N	Valid	41
	Missing	0
Mean		84.83
Std. Error of Mean		1.388
Median		84.00
Mode		88
Std. Deviation		8.888
Variance		78.995
Range		34
Minimum		66
Maximum		100
Sum		3478
Percentiles	25	78.00
	50	84.00
	75	92.00

Based on the table 4.5 above, it showed that the mean of post-test was 84.83, the median was 84.00, the mode was 88, the standart deviation was 8.888, the range was 34, the minimum score of pre-test was 66, the maximum score was 100. Then, the summary of pre-test was 3478.

Table 4.6 The Frequency of Students' Score After Taught by Using Stop Motion Animation

Posttest

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	66	1	2.4	2.4	2.4
	68	1	2.4	2.4	4.9
	72	4	9.8	9.8	14.6
	76	4	9.8	9.8	24.4
	80	4	9.8	9.8	34.1
	84	7	17.1	17.1	51.2
	88	8	19.5	19.5	70.7
	92	6	14.6	14.6	85.4
	96	3	7.3	7.3	92.7
	100	3	7.3	7.3	100.0
	Total	41	100.0	100.0	

From the table 4.6, the frequency of post-test score of experimental class after being distributed there are 2 students got score between 50-69, which means that the students' vocabulary mastery was fair, 27 students got score between 70-89 which means that students' vocabualry mastery was good, and 6 students got score between 90-100, means that students' vocabulary mastery was very good.

There were 1 student got score 66 (2.4%), 1 student got score 68 (2.4%), 4 students got score 72 (9.8%), 4 students got score 76 (9.8%), 4 studebts got score 80 (9.8%), 7 students got score 84 (17.1%), 8 students got score 88 (19.5%), 6 students got score 92 (14.6%), 3 students got score 96 (7.3%), and 3 students got score 100 (7.3%). The highest frequency was in score 88 (8 students).

2. The Data of Control Class

After conducting pre-test and post-test for control class, the researcher obtained the data. The data are as follows:

Table 4.7 Students' Score before and after being taught without using Stop Motion Animation

NO.	INITIAL NAMA	PRE-TEST	POST-TEST
1.	AKH	72	76
2.	AHS	64	72
3.	AAM	52	64
4.	AFAF	64	72
5.	AA	56	72
6.	ADR	80	92
7.	ATS	76	96
8.	AAM	64	88
9.	AS	80	84
10.	DLSB	36	36
11.	DMA	60	84
12.	DRP	56	68
13.	EPM	68	72
14.	FZ	60	68
15.	GCD	56	68
16.	HAN	64	76
17.	IW	72	76
18.	MAH	60	60
19.	MFN	76	84

20.	MCM	60	60
21.	NYA	64	68
22.	NMW	64	68
23.	RAAM	80	80
24.	RF	72	84
25.	SR	60	76
26.	SNK	76	76
27.	SVDM	68	80
28.	TA	56	60
29.	YDA	68	72
30.	YSK	80	80
31.	ZTZR	60	72
32.	ASN	76	80
33.	DID	60	76
34.	DGF	80	80
35.	ESP	68	72
36.	EAF	68	80
37.	FR	60	64
38.	GYR	72	76
39.	IA	56	64
40.	MR	72	72
41.	MAA	60	68

Based on the table 4.7, there 41 students as samples of the research. The descriptive statistic of control class is below:

a. Pre-Test of Control Class

The researcher used SPSS 18.0 version to know the descriptive statistic and the frequency of students' pre-test in control class. The frequency divided into into five creiterions: very good, good, fair, poor and very poor (see table 4.1). The result of the calculation is as follows:

Table 4.8 Descriptive Statistic of Pre-Test

Statistics

Pretest

N	Valid	41
	Missing	0
Mean		65.76
Std. Error of Mean		1.465
Median		64.00
Mode		60
Std. Deviation		9.383
Variance		88.039
Range		44
Minimum		36
Maximum		80
Sum		2696
Percentiles	25	60.00
	50	64.00
	75	72.00

Based on the table 4.8 above, it showed that the mean of pre-test was 65.76, the median was 64.00, the mode was 60, the standart deviation was 9.383, the range was 44, the minimum score of pre-test was 36, the maximum score was 80. Then, the summary of pre-test was 2696.

Table 4.9 The Frequency of Students' Pre-Test in Control Class

Pretest

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	36	1	2.4	2.4	2.4
	52	1	2.4	2.4	4.9
	56	5	12.2	12.2	17.1
	60	9	22.0	22.0	39.0
	64	6	14.6	14.6	53.7
	68	5	12.2	12.2	65.9
	72	5	12.2	12.2	78.0
	76	4	9.8	9.8	87.8
	80	5	12.2	12.2	100.0
	Total	41	100.0	100.0	

From the table 4.9 above, the frequency of pre-test score of control class after being distributed there are 1 student got score between 30-49, means that the students' vocabulary was poor, 25 students got score between 50-69, means that the students' vocabulary mastery was fair, and 14 students got score between 70-89, means that the students' vocabulary mastery was good.

There were 1 student got score 36 (2.4%), 1 student got score 52 (2.4%), 5 students got score 56 (12.2%), 9 students got score 60 (22.0%), 6 students got score 64 (14.6%), 5 students got score 68 (12.2%), 5 students got score 72 (12.2%), 4 students got score 76 (9.8%) and 5 students got score 80 (12.2%). The highest frequency was in score 60 (9 students).

b. Post-Test of Control Class

The researcher used SPSS 18.0 version to know the descriptive statistis and the frequency of students' post-test in control class. The frequency divided into into five creiterions: very good, good, fair, poor and very poor (see table 4.1). The result of the calculation is as follows:

Table 4.10 Descriptive Statistic of Post-Test

Statistics

Posttest

N	Valid	41
	Missing	0
Mean		73.56
Std. Error of Mean		1.604
Median		72.00
Mode		72
Std. Deviation		10.271
Variance		105.502
Range		60
Minimum		36
Maximum		96
Sum		3016
Percentiles	25	68.00
	50	72.00
	75	80.00

Based on the table above, it showed that the mean of post-test was 73.56, the median was 72.00, the mode was 72, the standart deviation was 10.271, the range was 60, the minimum score of pre-test was 36, the maximum score was 96. Then, the summary of pre-test was 3016.

Table 4.11 The Frequency Of Students' Post-Test in Control Class

Posttest

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	36	1	2.4	2.4	2.4
	60	3	7.3	7.3	9.8
	64	3	7.3	7.3	17.1
	68	6	14.6	14.6	31.7
	72	8	19.5	19.5	51.2
	76	7	17.1	17.1	68.3
	80	6	14.6	14.6	82.9
	84	4	9.8	9.8	92.7
	88	1	2.4	2.4	95.1
	92	1	2.4	2.4	97.6
	96	1	2.4	2.4	100.0
	Total	41	100.0	100.0	

From the table 4.11 above, the frequency of post-test score of control class after being distributed there are 1 student got score between 30-49, means that the student' vocabulary mastery was poor, 12 students got score between 50-69, mrans that the students' vocabulary was fair, 26 students got score between 70-89, means that the students' vocabulary was good and 2 students got score between 90-100, means that the students vocabulary mastery was very good.

There were 1 student got score 36 (2.4%), 3 students got score 60 (7.3%), 3 students got score 64 (7.3%), 6 students got score 68 (14.6%), 8 students got score 72 (19.5%), 7 students got score 76 (17.1%), 6 students got score 80 (14.6%), 4 students got score 84 (9.8%), 1 student got score 88 (2.4%), 1

student got score 92 (2.4%) and 1 student got score 96 (2.4%). The highest frequency was in score 72 (8 students).

B. Hypothesis Testing

There were two hypotheses here that was f and t hypothesis. Before discussing the t-test, the researcher needed to test the f-test. F-test was used to know the equality of variance of the two classes. While, the t-test was used to test the two means (experimental and control class). Althought the f-test was automatically serve in the SPSS table of t-test, the researcher write down f hypothesis as the requirement in quasi-experimental research design (experimental and control class). The hypothesis of this research are as follow:

1. Hypothesis testing of F-test
   a. $H_0 : \sigma_1^2 = \sigma_2^2$, means that there is an equal variance between experimental and control class.
   b. $H_a : \sigma_1^2 \neq \sigma_2^2$, means that there is no equal variance betwen experiment and control class.
   1) If *p-value* (Sig) bigger than 0.05, the null hypothesis (H_0) is not rejected. As such, *equal variances assumed* is used.
   2) If *p-value* (Sig) less than 0.05, the null hypothesis (H_0) is rejected. As such, *equal variances not assumed* is used.
2. Hypothesis testing of F-test
   a. Null hypothesis (Ho): There is no significant difference score on students' vocabulary mastery taught by using Stop Motion Animation and those taught by using Conventional Method.

b. Alternative hypothesis (Ha): There is significant difference score on students' vocabulary mastery taught by using Stop Motion Animation and those taught by using Conventional Method.

1) If sig (2-tailed) is smaller than 0.05, the alternative hypothesis (H_a) is not rejected and the null hypothesis (H_0) is rejected.
2) If sig (2-tailed) is bigger than 0.05, the alternative hypothesis (H_a) is rejected and the null hypothesis (H_0) is not rejected.

To know whether there is any significant difference score on students' vocabulary mastery taught by using Stop Motion Animation and those taught by using Conventional Method, the researcher analyzed the data by using SPSS 18.0 version. The result can be seen on table below:

Table 4.12 The Output of Group Statistics

Group Statistics

	CLASS	N	Mean	Std. Deviation	Std. Error Mean
Score	Experiment	41	84.83	8.888	1.388
	Control	41	73.56	10.271	1.604

Based on the table 4.12, it showed there were two classes, it was experimental class and control class. First, experimental class, showed N cell there was 41, Mean score of post-test in experimental class score was 84.83, Standart Deviation for experimental class was 8.888, and standart error mean was 1.388. While, in control class, showed N cell there was 41, mean score of post-test in control class score was 73.56, standart deviation was 10.271, and

standart error mean was 1.604. from the result above, it can be concluded that there was significant difference score on students' vocabulary mastery taught by using Stop Motion Animation and those taught by using Conventional Method.

Table 4.13 The Output of Independent Sample T-Test

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
NILAI	Equal variances assumed	.038	.847	5.312	80	.000	11.268	2.121	7.047	15.490
	Equal variances not assumed			5.312	78.382	.000	11.268	2.121	7.045	15.491

Based on the table 4.13 above, it showed that *P-value* (Sig) was 0.847 and it was bigger than 0.050 and H_0 was accepted. It can conclude that both variance experimental and control class are the same. The result is the writer used Equal Variance Assumed in making decision of T-test.

Based on the table 4.14, the significant value of the t (2-tailed) was 0.000. Because it was lower than the significant 0.05, it was concluded that

there was a significant in the student's achievement between the experimental and control class in mastering vocabulary. It mean that the alternative hypothesis (H_a) was accepted and the null hypothesis (H_0) was rejected. In other words, it could be conclude that there was significant difference score on students' vocabulary mastery taught by using Stop Motion Animation and those taught by using Conventional Method.

C. Discussion

Regarding to the research finding above, the data were analyzed by using SPSS 18.0 version. The calculation of the achievement using t-test showed that there was significant difference score on students' vocabulary achievement taught by using Stop Motion Animation and those taught by using Conventional Method. The mean of control class in pre-test was 65.76 and in post test improved to be 73.56. Then, the mean of experimental class of pre-test was 71.61 and in the post-test improved to be 84.83.

It can be interpreted that the vocabulary mastery of the students had been improved after getting treatment. On the output of t-test showed that the significant of the t (2-tailed) was 0.000. Because it was lower than the significant 0.05, it was concluded that there was as significant different on students' achievement between the experimental and control class in mastering vocabulary. Means that the alternative hypothesis (Ha) was accepted and the null hypothesis (H_0) was rejected. In other words, it can be conluded that there was significant difference score on students' vocabulary mastery taught by using Stop Motion Animation and those taught by using Conventional Method.

From the result of the data nalysis above, Stop Motion Animation can be used to teach vocabulary mastery of students. According to Herr et al as citied in Tobalina (2016: 70) stated that Stop Motion Animation is a technique which makes objects seem to move by themselves. In this case, Stop Motion Animation was learning media which is can increase students' concentration. The researcher used Stop Motion Animation to teach vocabulary at the first grade students of MTsN 5 Tulungagung.

The result of this research was also similiar with the previous studies. The first study was conducted by Tobalina (2016) entitled "The Impact of Stop Motion on EFL Learner's Retention and Recall of English Idiomatic Expression". This study uses experimental study with two different class group. The subject of the study is 3rd year ESO Spanish students of English as Foreign Language. The result is that, Stop Motion Animation is efficient to improve students' retention and recall of the English idioms. Compared with the previous study, this research used Stop Motion Animation to teach vocabulary mastery, while the previous one used Stop Motion Animation to teach English Idioms.

The second study was conducted by Imama and Mumfangati (2015) with the title "Designing Stop Motion Video Using Learning Style Approach to Teach Vocabulary 4th Grade SD Muhammadiyah Purwodiningratan 2 in the Academic Year 2015/2016". This study can be classified as Research and Development. The subject of the study is 4th grade of Muhammadiyah Purwodiningratan II elementary school in the academic years 2015/2016. The

way research to get the data by conducting an observation, interview, questionnaire and the test to the subject data. The result of the study is that, the post test result of experiment class was giving improvement rather than on the control class. Compared with the previous study, this study used Quasi Experimental study design, while the previous one used Research and Development study. The result of the study was the same, that is Stop Motion Animation was effective in teaching vocabulary mastery.

The other finding was students' motivation in learning activity. During the learning process the students were interested. It can be seen from the students enjoy in watching the Stop Motion Animation. This finding was the same with the theory of Waugh and Jolliffe state as citied in Tobalina (2016: 71) explain that "Stop Motion is an enjoyable activity", so it is likely to make teaching and learning process more entertaining, thus enhancing students' interest in the target vocabulary.

Based on the explanation above, Stop Motion Animation may able to make students to be active and improved their participation in the class, because this media helped and encouraged learner to sustain their interest and this media helped teacher to make enjoyable teaching activity . It mean that Stop Motion Animation could support them to be more concentrate with enjoyable media. It can be conclude that the use of Stop Motion Animation was effective on students' vocabulary mastery of the seventh grade students at MTsN 5 Tulungagung in academic year of 2018/2019.