CHAPTER IV

FINDING AND DISCUSSION

This chapter presents and discusses the finding of the study. There are four main topics discussed, namely research finding, normality and homogeneity testing, hypothesis testing, and discussion.

A. Research Finding

1. The Description of Data

This research aimed to know the effectiveness of using cake application in teaching students' vocabulary mastery. The effectiveness can be seen from the significant difference of mean scores of the students in the pre-test and post-test. After completing data analysis, the reseacher presents the results of statistical Analysis to answer the research problems presented in chapter I.

The researcher used tests, pre-test and post-test, to obtain the numeric data representing the vocabulary mastery of the students before and after being given treatment. The presentation of the data of students' scores as the results of pre-test and post-test are as follow.

a. Students Scores Before Being Taught by Cake Application

In this section, the researcher presents the students' scores before being taught by using cake application. That is called pretest scores. The pretest was done before a treatment process, that was teaching vocabulary using cake application was conducted. The pretest

was given to the students to know their level of vocabulary mastery before they got the treatment. Table 4.1 shows the students' scores resulted from the pretest. The students' names were identified based on the initial names of students.

Table 4.1 Students' Scores Before Being Taught by Using Cake Application

No	Students' Name	Pretest Score
1.	ARS	35
2.	ASR	45
3.	ATN	35
4.	ANA	45
5.	ADMZ	30
6.	CEM	45
7.	FEN	40
8.	JBR	55
9.	LRZ	40
10.	MNR	40
11.	MNZ	40
12.	MRAR	45
13.	MSU	45
14.	MZNR	55
15.	NA	60
16.	NTN	60
17.	NNM	55
18.	NEAB	55
19.	RAS	45
20.	SS	50
21.	SZF	60
22.	YFAS	45

Thus, tables are students' scores before being taught by cake application. The pretest was followed by 22 students of VII class that was taken sample. The researcher allocated 60 minutes for

administered. The pretest contained 20 questions in the form of an

multiple choice

Moreover, the researcher used SPSS 16.0 version to know the

descriptive statistics and the percentage of students' scores of pre-test,

the results of which are presented below.

Table 4.2 The descriptive statistics of pre-test

Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Pre	22	30	60	1025	46.59	8.645
Valid N (listwise)	22					

Table 4.2 shows that the mean score is 46.59, the sum of data

was 1025, the standard deviation is 8.645, the minimum score of pre-

test is 30, and the maximum score of pre-test is 60.

Table 4.3 The frequency of pre-test

PRE-TEST

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	30	1	4.5	4.5	4.5
	35	2	9.1	9.1	13.6
	40	4	18.2	18.2	31.8
	45	7	31.8	31.8	63.6
	50	1	4.5	4.5	68.2
	55	4	18.2	18.2	86.4
	60	3	13.6	13.6	100.0
	Total	22	100.0	100.0	

Table 4.3 shows the numbers described are the division and percentages of frequency distribution. The frequency of pre-test after being distributed was based on the criteria below:

Table 4.4 The Score's Criteria

Criteria	Range Score
Excellent	81-100
Very Good	61-80
Good	41-60
Enough	21-40
Poor	0-20

1. There were 7 students who got score 21-40 which meant that their scores in multiple choice questions were enough.

2. There were 15 students who got score 41-60 which meant that their score in multiple choice questions were good.

3. There were no students got score 61-80.

4. There were no student got score 81-100.

b. Students Scores After Being Taught by Using Cake Application

This section presents the students' scores after being taught by using cake application, which are called post-test scores. The posttest was done after a treatment process that was teaching by using cake application was being conducted. The posttest was given to students to know their scores after getting the treatment. Table 4.5 shows the students' scores resulted from the post-test. The students' names were identified based on the initial name of students.

Table 4.5 Students' Scores After Being Taught by Using cake

application

No	Students' Name	Post-test Score
1	ARS	35
2	ASR	45
3	ATN	35
4	ANA	45
5	ADMZ	30
6	CEM	45
7	FEN	40
8	JBR	55
9	LRZ	40
10	MNR	40
11	MNZ	40
12	MRAR	45
13	MSU	45
14	MZNR	55
15	NA	60
16	NTN	60
17	NNM	55
18	NEAB	55
19	RAS	45
20	SS	50
21	SZF	60
22	YFAS	45

Thus, tables are students' score after being taught by using cake application. The posttest was followed by 22 students of VII class that was taken sample. The researcher allocated 60 minutes for administered. The pretest contained 20 questions in the form of an essay.

The descriptive statistics and the percentage of students' scores of post-test can be discussed here. The percentage was categorized into five criteria include excellent, good, enough, poor, and very poor that

was demonstrated as in the table 4.4. Thus, the results of students'
scores post-test computation was as follow:

Table 4.6 The descriptive statistics of post-test

Descriptive Statistics

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Post	22	45	75	1301	59.14	7.698
Valid N (listwise)	22					

According to the table 4.6, it showed that the mean was 59,14,
the sum of data was 1301 standard deviation was 7,698, the minimum
score of post-test was 45, and the maximum score of post-test was 75.

Table 4.7 The frequency of post-test

Post

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	45	1	4.5	4.5	4.5
	50	3	13.6	13.6	18.2
	55	7	31.8	31.8	50.0
	60	3	13.6	13.6	63.6
	65	4	18.2	18.2	81.8
	66	1	4.5	4.5	86.4
	70	2	9.1	9.1	95.5
	75	1	4.5	4.5	100.0
	Total	22	100.0	100.0	

Table 4.7 showed the numbers that described about the division
and percentages of frequency distribution. The frequency of post-test
after being distributed was showed on the score's criteria. Then, the data
from the table could be elaborated as follows:

1. There were 14 students who got score 41-60 which meant that their score in multiple choice questions were good.

2. There were 8 students who got score 61-80 which meant that their score in multiple choice questions were very good.

B. Normality and Homogeneity Testing

To fulfiil the statistical assumptions of paired sample t-test, the reseacher needed to do normality and homogeneity testing on data from pre-test and post-test.

1. Normality Testing

To measure the normality testing in knowing whether the data normally distributed or not, the researcher computed the scores of pre-test and post-test by using One-Sample Kolmogorov-Smimov test in SPSS 16.0 by significant level 0.05. Then, the result of normality testing in this study can be seen as in the table 4.8.

Table 4.8 The result of normality testing

One-Sample Kolmogorov-Smirnov Test

		Pre	post
N		22	22
Normal Parameters[a]	Mean	46.59	59.14
	Std. Deviation	8.645	7.698
Most Extreme Differences	Absolute	.209	.204
	Positive	.209	.204
	Negative	-.153	-.141
Kolmogorov-Smirnov Z		.982	.959
Asymp. Sig. (2-tailed)		.290	.317

a. Test distribution is Normal.

According to the result of normality testing above, it shows that the value of Asymp. Sig (2 tailed) in pre-test was 0.290 and pot-test was 0.317. It was higher than α= 0.05. So, it can be interpreted that the data resulted by both tests are normally distributed. Thus, it satisfies the use of t-test to see the significant difference of two means.

2. **Homogeneity Testing**

In knowing whether the group that was used as the sample in the study had the same variance or not, the researcher decided do test the homogeneity of students' pre-test and post-test score. In measuring the homogeneity of the data, the researcher used SPSS 16.0 with the result could be seen as in the table 4.9.

Table 4.9 The result of homogeneity testing

Test of Homogeneity of Variances

Result

Levene Statistic	df1	df2	Sig.
.212	1	42	.647

From the table 4.9, it showed that the significance was 0.647 and it was higher than 0.05. It can be concluded that the data distribution was homogeneous. Hence, it also qualifies the use of t-test to see the significant difference of two means.

C. Hypothesis Testing

This study was conducted to know whether there is significant difference score of seventh grade students at MTsS PSM Rejotangan Tulungagung in academic year 2020/2021 in vocabulary mastery before and after being taught by using cake application. The data of this study were normally distributed and thus it satisfies the use of paired sample t-test to see the significant difference of the mean of pre-test and the mean of post-test.

Paired sample t-test was used because this study just involved one group of pre-test and post-test so that the two sets of scores resulted were of correlated samples. Hence, in this case paired sample t-test was appropriate to be used in analyzing the data. The result of t-test can seen below.

Table 4.10 The result of paired sample t test

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre test	46.59	22	8.645	1.843
	Post test	59.14	22	7.698	1.641

Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Pre test & Post test	22	.612	.002

Paired Samples Test

		Paired Differences							
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 1	Pre test - Post test	-12.545	7.249	1.545	-15.759	-9.332	-8.118	21	.000

Seeing the figures in the table, the reseacher could carried out the hypothesis testing in order to rejection or accept the null hypothesis. The base of rejecting or accepting the null hypothesis are: If P-value (denoted by Sig) $\leq$ α (5 %), H_o is rejected and thus H_a is accepted. But, if P-value $> \alpha$ (5 %), H_o is not rejected, or accepted and thus H_a is rejected.

Based on the table 4.10, the t was -8.118, with df = 21, and the p-value (two tailed) is 0.000. Given that the current test was one-tailed test, so the p-value 0.000 be divided by 2 = 0.000. The significance level was 0.05. For interpretation of decision based on the result of probability, it was:

1. If P-value $\leq \alpha$, the null hypothesis (H_0) is rejected and the alternative (Ha) is accepted. It means that the use cake application is effective for teaching listening at Junior High School.

2. If P-value $> \alpha$, the null hypothesis (H_0) is accepted and the alternative (Ha) is rejected. It means that the use of cake application is not effective for teaching listening at Junior High School.

Since the P-value (denoted by Sig in the table is **.**000), which is obviously far smaller than the value of α (0.05 = 5 %), then the null hypothesis is rejected. It means that the hypothesis stating that there is no significant

difference of the vocabulary achievement of the students before and after being taught by cake application is rejected. Consequently, the alternative hypothesis is accepted, which means the hypothesis stating that there is a significant difference of the vocabulary achievement of the students before and after being taught by cake application. So, the use of cake application is effective for teaching vocabulary in Junior High School.

D. Discussion

As in mentioned in the research problems stated in Chapter I, the researcher conducted an experiment in one group pre-test and post-test design. The procedures done during teaching and learning process were divided into three steps. The first step was administering a pre-test. It was conducted to know the students' basic competence and earlier knowledge before got the treatment. The next step was applying the treatment that is using cake application. The answer the question chosen by researcher . The treatment was done in three meetings. The last step was giving post-test. In the post-test, the students were given a test to know their scores after they were treating by cake application. After the steps were conducted, the researcher got data in the form of pre-test and post-test scores. Next, the researcher analyzed them by using paired sample t-test through SPSS 16.0.

As presented in table 4.6, the researcher presented a descriptive statistics of post-test scores and it was found that there is the different means of pre-test and post-test. The mean of pre-test score

is lower than post-test mean score (46.59 < 59.14). It can be roughly seen that there is a gain of mean score from pre-test to post-test. However, it still needs to be statistically proven through hypothesis testing.

As required in hypothesis, if the *p-value* was smaller than or equal to the α (0.05), then the alternative hypothesis (Ha) is accepted and the null hypothesis (H_0) is rejected. Thus, it was found that applying cake application in teaching vocabulary to the seventh grade students of MTsS PSM Rejotangan Tulungagung in academic year 2020/2021 is effective.

Based on the research finding, using cake application for vocabulary teaching shows real effectiveness that is it can help the students to improve their vocabulary mastery. It seems that this is due to the fact that using cake application, the students feel interested because they can choose the material they like. The students might feel more enjoyable and enthusiastic when being taught by using cake application because there are various genres of stories from movie clips which the students could select to watch.

Through this research, it is found that cake application was significantly successful in increasing the students' scores in vocabulary test. This finding verifies the theory by Langan (2008:16) stated that keeping a video is one of excellent ways to get practice in listening; especially vocabulary learning, as well as it would help the students to develop the habit of thinking on paper.

The results of this study are in line with the results of previous studies, namely from Kuo (2010) which stated that the dictation method was able to improve students' vocabulary mastery. The Cake application also uses the drill learning method in other words Cake is a drill-based application system that works online. The two treatments are the same, namely the drill system that is able to improve students' vocabulary mastery.

The results of the study which show that Cake is effective in improving students' vocabulary mastery have also been supported by a statement from Rizka (2019) through his research, Improving Students' Speaking Skill Through Cake-Learn English for Free App which states that Cake has been effective in increasing students' speaking 8th grade junior high school.

The speaking skills referred to in this study are intonation, clarity, pronunciation, and vocabulary mastery. Based on these result, Cake which is effective in improving vocabulary mastery in speaking skills is in line with the results of this study. In line with the effectiveness, students' responses to Cake application in Anisa, et al. (2021) stated that, most of students were very enthusiastic when the teacher explained the material using Cake Application. In the study, the results of the student questionnaire stated that the students were happy with the interactive display of the video in Cake and the video provided an example to easily imitate the pronunciation of a word.

Research by Wijaya, et al (2012) states that online video drills can increase students' vocabulary effectively. This is because in conventional drill learning students tend to feel bored, while by using online videos, students feel more comfortable and it is easier to imitate and recognize the vocabulary to be learned.. In addition, The use of cake as a multimedia that combines internet media with technical drills is in line with the results of research by Riyanto (2018) which states that media makes students more interested in drills and does not get bored easily when compared to conventional drills. Thus Cake, which is an online video drill-based application, can effectively improve students' vocabulary mastery

Based on the explanation above, it can be concluded that cake application was effective to be used to enhance the students' achievement in vocabulary mastery. The result of this study is the use of cake application was effective to increase the students' vocabulary mastery of the seventh grade of MTsS PSM Rejotangan Tulungagung.