

CHAPTER IV

RESEARCH FINDING AND DISCUSSION

This chapter presents the data findings of the research, covering description of data, data analysis, hypothesis testing, and discussion.

A. The description of the Data

The researcher conducted the data collection is to know whether there was significant different between students' score before and after being taught by using Secret Message Game. In this research, the researcher did a pre-experimental research about the effectiveness of secret message game toward students' vocabulary achievement of first grade students at MTs Al Huda Bandung Tulungagung in the academic year 2015/2016. The researcher involved a class consists of 28 students. The data were obtained trough administering tests. The first was pre-test which was done before the treatment applied to the students. The purpose was to know the students' basic competence and their prior knowledge before being taught by using the treatment. The result of the pre-test showed that students' vocabulary mastery was poor. They got some difficulty to answer the questions from the test.

After administering the pre-test on March 4th 2016, the researcher applied the treatment to the students, which was Secret Message Game in teaching vocabulary. The treatment was on March 4th, 8th, 11th, 15th 2016. During the treatment, students enjoyed learning and enthusiastic to play the game. After the treatment was finished, the researcher administered post-test on March 15th 2016 to know students' vocabulary mastery after the treatment process. And the result of the pre-test and the post-test showed that the students' vocabulary mastery improved significantly.

The detail description of the students' scores can be seen as follows:

1. Students' Vocabulary Achievement Before being Taught by Using Secret Message Game.

Pre-test was followed by 28 students. The time allocation was 40 minutes to do the test. This test was administered on March 4th 2016. In the pre-test, the students must answer 30 items in three different kinds of test formats. The first part is cloze test consist of 15 items. Second is matching test consist of 10 items. The last is arranging random letter and write down the meaning consist of 5 items. The total of students who took the pre-test was 28 students. The highest score in the pre-test was 80 and the lowest score was 49. This test was intended to know the students' basic competence in vocabulary before get the treatment. The students' vocabulary achievement in pre-test was presented below:

Table 4.1 The Students' Score before being Taught by Using Secret Message Game

No.	Students	Pre-Test Score
1.	ARA	85
2.	AF	49
3.	ASJ	58
4.	AGS	47
5.	AS	63
6.	DNBJ	56
7.	FCS	69
8.	II	50
9.	KYN	63
10.	LM	66
11.	MH	76
12.	MAD	80
13.	MAAH	46
14.	MZS	73
15.	MAA	54
16.	MIF	80
17.	MYT	78
18.	NAK	67
19.	QM	62
20.	RO	63
21.	RAS	70
22.	SMS	60
23.	UA	54
24.	UMC	62
25.	WIP	55
26.	WRHGP	72
27.	ZRP	64
28.	ZA	56

The data of students' pre-test, then were arranged in the form of frequency and percentages through score's criteria, as they were presented below:

Table 4.2 The Percentage of Students' Score in Pre-Test

Grade	Range of Score	Frequency (f)	Percentage (p)
A	91-100	-	-
B	81-90	1	4%
C	71-80	6	21%
D	61-70	10	36%
E	51-60	7	25%
F	41-50	4	14%
G	0-40	-	-
		$\Sigma f = 28$	$\Sigma p = 100\%$

Based on the table above, the criteria of students' scores in pre-test were presented as follows:

Table 4.3 The Criteria of Students' Score

No.	Score's Range	Grade	Criteria
1.	91-100	A	Excellent
2.	81-90	B	Very Good
3.	71-80	C	Good
4.	61-70	D	Fair
5.	51-60	E	Enough
6.	41-50	F	Poor
7.	0-40	G	Very Poor

From the table 4.2 and 4.3 above, it can be concluded that the average of students' achievement in pre-test were; very good criteria 4% in the score's range 81-90 with grade B, good criteria 21% in the score's range 71-80 with grade C while fair criteria 36% in the score's range 61-70 with grade D, enough criteria 25% in

the score's range 51-60 with grade E, poor criteria 14% in the score's range 41-50 with grade F. It can be seen that the majority of the students got score under the average.

Meanwhile, the descriptive statistic of pre-test which consisted of mean, median, and mode were presented below:

Table 4.4 Descriptive Statistic of Pre-Test Score

Statistics		
VAR00001		
N	Valid	28
	Missing	0
Mean		63.5000
Median		63.0000
Mode		63.00
Std. Deviation		1.05602E1
Minimum		46.00
Maximum		85.00
Sum		1778.00

The table 4.4 above showed that the students consisted of 28 students. The mean of the score was 63.5. This meant that the average of 28 students got score 63.5. Meanwhile, the median score was 63.00, the mode score was 63.00. The mode meant that the score has the highest frequency. Then the standard deviation was 1.05602.

Also, the table showed minimum score was 46.00, which were the lowest score. And the maximum was 85.00, which were the highest score.

The frequency of pre-test consisted of score, frequency, percent, valid percent, and cumulative percent were presented below:

Table 4.5 Frequency of Pre-Test

		VAR00001			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	46	1	3.6	3.6	3.6
	47	1	3.6	3.6	7.1
	49	1	3.6	3.6	10.7
	50	1	3.6	3.6	14.3
	54	2	7.1	7.1	21.4
	55	1	3.6	3.6	25.0
	56	2	7.1	7.1	32.1
	58	1	3.6	3.6	35.7
	60	1	3.6	3.6	39.3
	62	2	7.1	7.1	46.4
	63	3	10.7	10.7	57.1
	64	1	3.6	3.6	60.7
	66	1	3.6	3.6	64.3
	67	1	3.6	3.6	67.9
	69	1	3.6	3.6	71.4
	70	1	3.6	3.6	75.0
	72	1	3.6	3.6	78.6
	73	1	3.6	3.6	82.1
	76	1	3.6	3.6	85.7
	78	1	3.6	3.6	89.3
	80	2	7.1	7.1	96.4
	85	1	3.6	3.6	100.0
Total		28	100.0	100.0	

Based on the table 4.5, it concluded that the students' ability before being taught by using secret message game; there were 4 students (14%) got score's range

between 41-50, it meant that students' vocabulary achievement was poor, 7 students (25%) got score's range between 51-60, it showed that students' vocabulary achievement was enough, 10 students (36%) got score's range between 61-70, it meant that students' vocabulary achievement was average, 6 students (21%) got score's range between 71-80, it showed that students' vocabulary achievement was good, and there were 1 student (4%) got score's range between 81-90, it meant that student's vocabulary achievement was very good.

2. Students' Vocabulary Achievement After being Taught by Using Secret Message Game.

After being taught by the treatment, that is Secret Message Game, the students were given a post-test. The test was followed by 28 students. The time allocation was 40 minutes to do the test. This test was administered on March 15th 2016. The test was different from the pre-test but both of the tests had the same level of difficulties. The researcher gave the test that contains 30 items with 3 parts of test. The first part is cloze test consist of 15 items. Second is matching test consist of 10 items. The last is arranging random letter and write down the meaning consist of 5 items. The total of students who took the post-test was 28 students. The highest score in post-test was 94 and the lowest score was 64. This test was used to know how significant the treatment

influence students' vocabulary ability. The students' vocabulary achievement in post-test was presented as follows:

Table 4.6 The Students' Score After being Taught by Using Secret Message Game

No.	Students	Post-Test Score
1.	ARA	95
2.	AF	76
3.	ASJ	72
4.	AGS	60
5.	AS	71
6.	DNBJ	71
7.	FCS	70
8.	II	65
9.	KYN	69
10.	LM	79
11.	MH	82
12.	MAD	80
13.	MAAH	65
14.	MZS	79
15.	MAA	84
16.	MIF	96
17.	MYT	81
18.	NAK	79
19.	QM	75
20.	RO	83
21.	RAS	78
22.	SMS	73
23.	UA	71
24.	UMC	76
25.	WIP	75
26.	WRHGP	84
27.	ZRP	77
28.	ZA	69

The data of students' pre-test, then were arranged in the form of frequency and percentages through score's criteria, as they were presented below:

Table 4.7 The Percentage of Students' Score in Post-Test

Grade	Range of Score	Frequency (f)	Percentage (p)
A	91-100	2	7%
B	81-90	5	18%
C	71-80	14	50%
D	61-70	6	21%
E	51-60	1	4%
F	41-50	-	-
G	0-40	-	-
		$\Sigma f = 28$	$\Sigma p = 100\%$

Based on the table above, the criteria of students' scores in pre-test were presented as follows:

Table 4.8 The Criteria of Students' Score

No.	Score's Range	Grade	Criteria
1.	91-100	A	Excellent
2.	81-90	B	Very Good
3.	71-80	C	Good
4.	61-70	D	Fair
5.	51-60	E	Enough
6.	41-50	F	Poor
7.	0-40	G	Very Poor

From the table 4.7 and 4.8 above, it can be concluded that the average of students' achievement in pre-test were; excellent criteria 7% in the score's range 91-100, very good criteria 18% in the score's range 81-90 with grade B, good criteria 50% in the score's range 71-80 with grade C, average criteria 21% in the score's range 61-70 with grade D, enough criteria 4% in the score's range 51-60 with grade E. It can be seen that the majority of the students got score upper the average.

Meanwhile, the descriptive statistic of pre-test which consisted of mean, median, and mode were presented below:

Table 4.9 Descriptive Statistic of Post-Test

Statistics		
VAR00002		
N	Valid	28
	Missing	0
Mean		76.2500
Median		76.0000
Mode		71.00
Std. Deviation		8.11777
Minimum		60.00
Maximum		96.00
Sum		2135.00

The table above showed that there were 28 test takers. The mean of the score was 76.25. The mean 76.25 meant that the average of 28 students got score 76.25. Meanwhile, the median was 76.00, the mode was 71.00.

Also, the table showed minimum score was 60.00, which were the lowest score. And the maximum was 96.00, which were the highest score.

The frequency of pre-test consisted of score, frequency, percent, valid percent, and cumulative percent were presented below:

Table 4.10 Frequency of Post-Test

VAR00002					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	60	1	3.6	3.6	3.6
	65	2	7.1	7.1	10.7
	69	2	7.1	7.1	17.9
	70	1	3.6	3.6	21.4
	71	3	10.7	10.7	32.1
	72	1	3.6	3.6	35.7
	73	1	3.6	3.6	39.3
	75	2	7.1	7.1	46.4
	76	2	7.1	7.1	53.6
	77	1	3.6	3.6	57.1
	78	1	3.6	3.6	60.7
	79	3	10.7	10.7	71.4
	80	1	3.6	3.6	75.0
	81	1	3.6	3.6	78.6
	82	1	3.6	3.6	82.1
	83	1	3.6	3.6	85.7
	84	2	7.1	7.1	92.9
	95	1	3.6	3.6	96.4
	96	1	3.6	3.6	100.0
Total		28	100.0	100.0	

Based on the table 4.10, it can be concluded that the students' ability before being taught by using secret message game is there were 1 student (4%) got score's range between 51-60, it meant that students' vocabulary achievement was enough, 6 students (21%) got score's range between 61-70, it showed that students' vocabulary achievement was average, 14 students (50%) got score's range between 71-80, it meant that students' vocabulary achievement was good, 5 students (80%) got score's range between 81-90, it showed that students' vocabulary achievement was very good, and there were 2 students (7%) got score's range between 91-100, it meant that student's vocabulary achievement was excellent.

The result of both pre-test and post test of one group experimental were presented as follow:

Table 4.11 The Result of Pre-Test and Post-Test

No.	Students	Pre-Test Score	Post-Test Score
1.	ARA	85	95
2.	AF	49	76
3.	ASJ	58	72
4.	AGS	47	60
5.	AS	63	71
6.	DNBJ	56	71
7.	FCS	69	70
8.	II	50	65
9.	KYN	63	69
10.	LM	66	79
11.	MH	76	82
12.	MAD	80	80
13.	MAAH	46	65
14.	MZS	73	79
15.	MAA	54	84
16.	MIF	80	96
17.	MYT	78	81
18.	NAK	67	79
19.	QM	62	75
20.	RO	63	83
21.	RAS	70	78
22.	SMS	60	73
23.	UA	54	71
24.	UMC	62	76
25.	WIP	55	75
26.	WRHGP	72	84
27.	ZRP	64	77
28.	ZA	56	69

From the table 4.11 presented above, it can be concluded that secret message game can be used to teach vocabulary for students and can improve students' vocabulary achievement.

B. Data Analysis

Data Analysis was done to know the difference score of students' vocabulary achievement before and after being taught by using secret message game. Referring to the data in the form of students' score gained from pre-test and post-test as stated above, the researcher analyze the data used statistical test with Paired Sample T-test stated by SPSS 16.0 for windows. The result was as follow:

Table 4.12 Paired Sample Statistics

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	VAR00001	63.5000	28	10.56023	1.99570
	VAR00002	76.2500	28	8.11777	1.53411

The table showed that the data presented are the performances scores of the members of one group which the students were taught before and after using secret message game in improving vocabulary mastery. Output paired sample statistic showed that there were mean scores difference between pre-test and post-test. The mean score of pre-test was 63.50, and the mean score of post-test was 76.25. It meant the mean score of post-test was higher that the mean score of pre-test. The number of subjects or test takers (N) was 28 students.

Meanwhile, standard deviation of pre-test was 10.56 and the standard deviation of post-test was 8.11. Mean standard error of pre-test was 1.996, while

mean standard error of post-test was 1.534. Thus, it can be concluded that the students' vocabulary value increased after they were taught by using secret message game.

Table 4.13 Paired Sample Correlations

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	VAR00001 & VAR00002	28	.760	.000

The table 4.13 of paired sample correlation above showed that the large correlation between samples was 0.760 and numeral significance was 0.000.

Interpretation of decision based on the result of probability achievement they were:

- a. Based on the test score t compared with t_c (t count) with t_t (t table), where $df=27$, the result of numeral: 2.052 for standard significant 5% and 2.771 for standard significant 1%. With $t_{count} = -9.825$, it means that larger from t_{table} (symbol minus in this matter ignored at standard significant 5% as well at standard significant 1%, it means the null hypothesis was rejected).
- b. Based on the large of digit significant. In this case decision taken from the following consideration:
 - 1) If probability > 0.05 then null hypothesis was accepted.
 - 2) If probability < 0.05 then null hypothesis was rejected.

With numeral of significant value $0.000 < \text{than significant level } 0.05$, then the null hypothesis stated that there is no significant different between students' score before using Secret Message Game and after using Secret Message Game. At the first grade of MTs Al Huda Bandung Tulungagung was rejected.

Next, the researcher find out the t_{count} to compare two kinds of data sample used SPSS 16.0 for windows. The result was as follows:

Table 4.14 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 VAR00001 - VAR00002	-1.27500E1	6.86713	1.29776	-15.41279	-10.08721	-9.825	27	.000

The table 4.14 above showed the result of analysis of T-test used SPSS 16.0 for windows. The output paired sample test showed the mean of pre-test and post-test was -1.275, standard deviation was 6.86), standard error mean was 1.298. Then, the lower difference was -15.413, while the upper difference was -10.087. The result of t_{count} was -9.825 (symbol minus ignored) with df 27 and significance (2-tailed) was 0.000.

Based on the statistical calculation using SPSS 16.0, the df was 27 and t_{count} was 9.825 and to know whether it is significant or not, the researcher used t_{table} to know the significant. The result of t_{table} with significant level 5% (0.05) and df 27 was 2.052. So, it can be concluded that t_{count} is bigger than t_{table} ($t_{\text{count}} > t_{\text{table}}$) ($9.825 > 2.052$). If t_{count} is bigger than t_{table} , it means H_0 is rejected and H_1 is accepted. In contrary, if t_{count} is smaller than t_{table} means that H_0 is accepted and H_1 is rejected.

From the result above, t_{count} is bigger than t_{table} . So, the alternative hypothesis (H_1) was accepted and null hypothesis (H_0) was rejected. It means that there is different score on the students' vocabulary achievement before and after being taught by using Secret Message Game. There was different on *Paired Sample Statistic* that the mean before being taught by using Secret Message Game was 63.50, and after being taught by using Secret Message Game was 76.25, it means that the mean before being taught by using Secret Message Game was lower than after being taught by using Secret Message Game. So, it can be concluded that the Secret Message Game is effective to improve the students' vocabulary achievement in first grade of MTs Al Huda Bandung Tulungagung.

C. Hypothesis Testing

The hypothesis testing of this research was as follows:

1. If the significant value $<$ significant level, the alternative hypothesis (H_1) was accepted and null hypothesis (H_0) was rejected. It means that there was different score on the students' vocabulary achievement before and after being taught by using Secret Message Game. The different was significant.
2. If the significant value $>$ significant level, the null hypothesis (H_0) was accepted and the alternative hypothesis (H_1) was rejected. It means that there was not different score on the students' vocabulary achievement before and after being taught by using Secret Message Game. The different was not significant.

Based on statistical calculating using SPSS 16.0, the researcher gave interpretation to significant value. The significant value of the research was 0.000, significant level 0.05 and the t_{table} 2.052 the df: 27 whereas the t_{count} 9.825. When the significant value (0.000) $<$ significant level (0.05) the alternative hypothesis (H_1) was accepted and the null hypothesis (H_0) was rejected. While significant value (0.000) $>$ significant level (0.05) the null hypothesis (H_0) was accepted. Because significant value (0.000) was smaller than significant level (0.05), it can be concluded that alternative hypothesis (H_1) was accepted and null hypothesis (H_0) was rejected. It means that there is different score on the students' vocabulary achievement before and after being taught by using Secret Message Game. There was different on *Paired Sample Statistic* that the mean before being taught by using Secret Message Game

was 63.50, and after being taught by using Secret Message Game was 76.25, it means that the mean before being taught by using Secret Message Game was lower than after being taught by using Secret Message Game. So, it can be concluded that the Secret Message Game is effective to improve the students' vocabulary achievement in first grade of MTs Al Huda Bandung Tulungagung.

D. Discussion

The objective of this research was to know the effectiveness of Secret Message Game toward students' vocabulary achievement of first grade of MTs Al Huda Bandung Tulungagung in the academic year 2015/2016.

In order to reach the objective of the research, the researcher conducted an experimental research with a pre-test and post-test design. The research procedures done during teaching and learning process were divided into three steps. The first step was administering pre-test to students. The test was used to know the students' basic competence in vocabulary before being taught by using Secret Message Game. The pre-test was administered to the students at the first meeting on March 4th 2016. The researcher gave the test that contains 30 items with 3 parts of test. The first part is cloze test consist of 15 items. Second is matching test consist of 10 items. The last is arranging random letter and write down the meaning consist of 5 items. The total of students who took the pre-test was 28 students.

The second step was giving the treatment to students. The treatment in this research was asking students to solve the problem (secret message) given by teacher in group, in this case the problem was some questions. The researcher divided students into five groups; each group consisted of 5-6 students. During the treatment, the students were enthusiastic to study vocabulary. All students were active to work in group to solve the problems. The researcher was done the treatment four times on March 4th, 8th, 11th, 15th 2016.

And the last step was administered post-test to students. This test was used to know how significant the treatment influence students' vocabulary ability. In the post-test, the students are given a test to know their vocabulary ability after they treated by using Secret Message Game. The post-test is administered to the students at the last meeting on March 15th 2016. The researcher gave the test that contains 30 items with 3 parts of test. The first part is cloze test consist of 15 items. Second is matching test consist of 10 items. The last is arranging random letter and write down the meaning consist of 5 items. The total of students who took the pre-test was 28 students.

After the pre-test and post-test was administered, the researcher got the data in the form of scores. In the pre-test, the mean was 63.50 from 28 students, while the mean of post-test was 76.25 from 28 students. The score showed that the result of post-test was higher than pre-test. From result above, it can be concluded that the students got better achievement in mastering vocabulary after being taught by using

Secret Message Game. The students' vocabulary achievement was improved after they were taught by using Secret Message Game.

Thus, teaching vocabulary by using Secret Message Game made students know some new vocabularies and understand more easily. Accordingly, Secret Message Game can be used as the alternative way to teach vocabulary to students. The teaching learning process using games may make students have fun and enjoy in understanding material. Moreover, this activity invites students to be more active in class.

The data was analyzed by using T-test and SPSS 16.0 for windows. The result of t_{count} was 9.825 and df was 27. Then, the researcher used t_{table} with significant level 5% (0.05) and df= 27. The result of t_{table} was 2.052. So from the result, it is known that t_{count} bigger than t_{table} ($9.825 > 2.052$). T_{count} is bigger than t_{table} means that the Null Hypothesis (H_0) is rejected and Alternative Hypothesis (H_1) is accepted. Thus, the finding indicated that the use of Secret Message Game gave significant effect on students' vocabulary achievement. There is significant difference between students' vocabulary achievement before and after being taught by using secret message game. The Secret Message Game can improve students' vocabulary mastery.

As we know before that vocabulary was important to students to communicate with friends and teacher and students need to improve their vocabulary mastery to pass the English lesson at school. According to Linse (2005) "vocabulary is the

collection of words that an individual knows.” Pollard (2008) states that “vocabulary is a basic building block of language learning. Students need to know words, their meanings, how they are spelt and how they are pronounced.” In addition, Hiebert and Kamil (2005) state that, “generically, vocabulary is the knowledge of meaning of words.” Hence, vocabulary is the things that is included in language and used by people to communicate each others in their daily activity.

Game is a fun activity that can make the gamer or people who playing game feel enjoy and happy. According to Hadfield (1996), a game is an activity with rules, a goal and an element of fun. There are two kinds of games: competitive games, in which players or teams race to be the first to reach the goal, and co-operative games, in which players or teams work together towards a common goal. The emphasis in the game is on successful communication rather than on correctness of language. This finding also supported by Thiagarajan (in Wahyuni and Herawati 2012) state that message secret game is a game which ensures that players understand the principles presented in a handout. This game taps into the players’ visual intelligence. And according to Wahyuni and Herawati (2012) “message secret is one of the games to teach vocabulary.” The student study vocabulary in group with a card from teacher which have some clues or questions. This game is appropriate for student to learn vocabulary because by playing this game students get new vocabulary and enrich their knowledge.

According to Kim (1995) there are many advantages of using games in the classroom, they are: the first, games are a welcome break from the usual routine of the language class. The second, they are motivating and challenging. The third, learning a language requires a great deal of effort. Next, games help students to make and sustain the effort of learning. Then, games provide language practice in the various skills- speaking, writing, listening and reading. The next, they encourage students to interact and communicate. The last, they create a meaningful context for language use. So, the advantages if teacher using game to teach in class are: the games can motivate students to be more active in class because game is challenging activity. By using the games also, it can be minimize the students' burden and boring in learning English. When teacher uses games to teach, the teacher can gather information about all students' skills, they are listening, speaking, reading and writing. And students can communicate with their classmates during the games.

From the explanation above, the implementation of Secret Message Game in teaching and learning process gave a positive effect on the students' achievement, because they can study vocabulary easily and relax without any burden. It can be done because by fun learning, information can be understood and maintained well. Teaching and learning process by using games serve fun situation for learners. Hence, the learners can improve their understanding and their vocabulary trough the implementation of games.