

## **CHAPTER IV**

### **RESEARCH FINDING AND DISCUSSION**

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

#### **A. The Description of the Data**

As mentioned previously, the researcher wanted to know whether there was different score between the students before and after 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 second grade at SMPN 3 Kedungwaru, Tulungagung in the academic year 2013/2014. The researcher involved a class consisted 23 students. The data were collected through administering test. The first test was pre-test done before the treatment applied to the students. The purpose was to know the students' vocabulary ability before being the treatment. The result of pre-test showed that their vocabulary mastery was poor. They got difficulty to answer and rearranged the random words as well as letters' random correctly.

After administering the pre-test, the researcher gave treatment to the students by using Secret Message Game interacting vocabulary. During the treatment, the students enjoyed learning and they were enthusiastic to play the game. When treatment was finished, the researcher administered posttest to know

the students' ability of vocabulary after being taught by using Secret Message Game. Apparently, the result of the post-test showed that the students' vocabulary mastery improved significantly.

### **1. Students' Vocabulary Achievement before being Taught by Using Secret Message Game**

In the Pre-test, the students must answer twenty items in four different kinds of test formats. The first kind was multiple-choice consisted five items. The second was filling the blank consisted of five items. The third was rearranging the word consisted of five items. And the last was rearranging words and rearranged the letters randomized consisted five items. The numbers of students who took the Pre-test were 23 students. The highest score in pre-test was 85 and the lowest score was 46. This test was intended to know the students' vocabulary achievement before students got treatment. The student's vocabulary achievement in pretest was presented in Table 4.1 below;

**Table 4.1 The Students' Achievement before using Secret Message Game  
(Pre-Test)**

No	Students	Score of Pre-Test
1	A.D.A.	80
2	A.R.	78
3	A.K.S.	67
4	B.F.S.	62
5	D.A.H.	63
6	D.A.P.	76
7	D.A.	80
8	E.D.N.	46
9	E.R.	73
10	F.R.N.I.	54
11	F.O.	56
12	H.C.	69
13	I.D.	50
14	I.K.	63
15	I.S.	66
16	K.A.S.	85
17	M.C.N.	49
18	M.A.K.	58
19	M.A.N.	47
20	N.L.P.H.	63
21	P.A.K.	70
22	P.K.A.	60
23	R.N.	54

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

**Table 4.2 The Percentages of Students' Vocabulary before being Taught  
using Secret Message Game**

Grade	Criteria Of Score	Frequency (f)	Percentage (p)
A	91-100	-	-
B	81-90	1	4%
C	71-80	5	22%
D	61-70	8	35%
E	41-60	9	39%
F	0-40	-	-
		$\Sigma f = 23$	$\Sigma p 100\%$

Based on the table of percentage and criteria above, the students' scores in the pretest were presented as follows:

**Table 4.3 The Score's Criteria of the Students before being Taught using Secret Message Game**

No	Score's Criteria	Grade	Criteria
1	91-100	A	Excellent
2	81-90	B	Very Good
3	71-80	C	Good
4	61-70	D	Average
5	41-60	E	Poor
6	0-40	F	Very Poor

From the criteria above, it can be concluded that the students' achievement before taught using Secret Message Game above the average was 26% with very good score 4% where the students got score range from to 81-90 with grade B and good score 22% where the students got score range from to 71-80 with grade C. Meanwhile, there were 35% with average criteria where the students got score range from to 61-70 with grade D. Finally, 39% with poor criteria where the students only got score range from to 41-60 with grade E. From the table above, the majority of the students still got score below the average.

Meanwhile, the descriptive statistic of pretest which consisted of mean, median, and mode were presented as below:

**Table 4.4 Descriptive Statistic of Pre-test Score****Statistics**

## PRETEST

N	Valid	23
	Missing	0
Mean		63.8696
Median		63.0000
Mode		63.00

The table above showed that there were 23 test takers. The means score was 63.86. The mean 63.86 meant that the average of 23 students score 63.86. So, the student's score 63.86 was average score. Meanwhile, the median was 63.00. And the mode was 63.00.

The frequency of pretest consisted of score, frequency, percent, valid percent, and cumulative percent were presented below:

**Table 4.5 Frequency of Pre-test**

PRETEST					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	46	1	4.3	4.3	4.3
	47	1	4.3	4.3	8.7
	49	1	4.3	4.3	13.0
	50	1	4.3	4.3	17.4
	54	2	8.7	8.7	26.1
	56	1	4.3	4.3	30.4
	58	1	4.3	4.3	34.8
	60	1	4.3	4.3	39.1
	62	1	4.3	4.3	43.5
	63	3	13.0	13.0	56.5
	66	1	4.3	4.3	60.9
	67	1	4.3	4.3	65.2
	69	1	4.3	4.3	69.6
	70	1	4.3	4.3	73.9
	73	1	4.3	4.3	78.3
	76	1	4.3	4.3	82.6
	78	1	4.3	4.3	87.0
	80	2	8.7	8.7	95.7
	85	1	4.3	4.3	100.0
	Total		23	100.0	100.0

The table showed that mean score was 63.86, it meant that the average of 23 students score 63.86. The median score was 63. In the data score (score 46-85) the median was 63. The mode score was 63. The frequency of pretest after it was distributed there were 9 students (38.9%) got score between 41-60, it meant that on the students' vocabulary achievement was poor, 8

students (34.9%) got score between 61-70, it showed that the students' vocabulary score was average, 5 students' (21.9%) got score between 71-80, it meant that the students' vocabulary achievement was good, and there was only 1 students (4.3%) got score between 81-90, it meant that the students' vocabulary achievement was very good.

## **2. Students' Vocabulary Achievement after being Taught by Using Secret Message Game**

After being given a treatment using Secret Message Game, the students were given a post test. The test was different from the pretest but both of them had the same level of difficulties. The first kind was multiple-choice consisted five items. The second was filling the blank consisted of five items. The third was rearranging the word consisted of five items. And the last was rearranging words and rearranged the letters randomized consisted five items. The numbers of students who took the Post-test were 23 students. The highest score in post-test was 100 and the lowest score was 60. This test was intended to know the students' vocabulary achievement after students got treatment. The students' vocabulary achievement in post-test was presented in Table below:

**Table 4.6 The students' Achievement after being Taught using Secret Message Game  
(Post-Test)**

No	Students	Score of Post-Test
1	A.D.A.	100
2	A.R.	79
3	A.K.S.	79
4	B.F.S.	75
5	D.A.H.	83
6	D.A.P.	81
7	D.A.	80
8	E.D.N.	64
9	E.R.	78
10	F.R.N.I.	85
11	F.O.	71
12	H.C.	70
13	I.D.	64
14	I.K.	69
15	I.S.	78
16	K.A.S.	100
17	M.C.N.	75
18	M.A.K.	71
19	M.A.N.	60
20	N.L.P.H.	71
21	P.A.K.	78
22	P.K.A.	73
23	R.N.	71

The data of students' post-test, then were arranged in the form of frequency and percentages through score's criteria, as it was presented in the following table:

**Table 4.7 The percentages of students' vocabulary after using Secret Message Game**

Grade	Criteria Of Score	Frequency (f)	Percentage (p)
A	91-100	2	9%
B	81-90	3	13%
C	71-80	13	57%
D	61-70	4	17%
E	41-60	1	4%
F	0-40	-	-
		$\Sigma f$ 23	$\Sigma p$ 100%



Based on the table of percentage and criteria above, the students' scores in the pretest were presented as follows:

**Table 4.8 The Score's Criteria of the Students after being Taught using Secret Message Game**

No	Score's Criteria	Grade	Criteria
1	91-100	A	Excellent
2	81-90	B	Very Good
3	71-80	C	Good
4	61-70	D	Average
5	41-60	E	Poor
6	0-40	F	Very Poor

From the criteria above, it can be concluded that the students who achieved above the average was 9% categorized as excellent score where the students got score range 91-100 with grade A. Meanwhile, there were 13% with very good criteria where the students got score range from to 81-90 with grade B. the table also showed that there were 57% with good criteria where the students got score range from to 71-80 with grade C. on the other hand, there were 17% with average criteria where the students got score range from to 61-70 with grade D. Finally, 4% with poor criteria where the students only got score range from to 41-60 with grade E. From the table above, the majority of the students got score upper the average.

Meanwhile, the descriptive statistic of posttest which consist of mean, median, and mode were presented as below:

**Table 4.9 Descriptive Statistic of Post-test Score**

Statistics		
POSTTEST		
N	Valid	23
	Missing	0
Mean		76.3043
Median		75.0000
Mode		71.00

The table above showed that there were 23 test takers. The means score was 76.30. The mean 76.30 meant that the average of 23 students score 76.30. So, the student's score 76.30 was average score. Meanwhile, the median was 75.00. And the mode was 71.00.

The frequency of pretest which consist of data score, frequency, percent, valid percent, and cumulative percent were presented as below:

**Table 4.10 Frequency of Post-test**

POSTTEST					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	60	1	4.3	4.3	4.3
	64	2	8.7	8.7	13.0
	69	1	4.3	4.3	17.4
	70	1	4.3	4.3	21.7
	71	4	17.4	17.4	39.1
	73	1	4.3	4.3	43.5
	75	2	8.7	8.7	52.2
	78	3	13.0	13.0	65.2
	79	2	8.7	8.7	73.9
	80	1	4.3	4.3	78.3
	81	1	4.3	4.3	82.6
	83	1	4.3	4.3	87.0
	85	1	4.3	4.3	91.3
	100	2	8.7	8.7	100.0
	Total	23	100.0	100.0	

The table showed that mean score was 76.30, it meant that the average of 23 students score 76.30. The median score was 75. In the data score (score 60-100) the median was 75. The mode score was 71. The frequency of pretest after it was distributed there was only 1 students (4.3%) got score between 41-60, it meant that on the students' vocabulary achievement was poor, 4 students (17.3%) got score between 61-70, it showed that the students' vocabulary score was average, 13 students (56.8%) got score between 71-80, it meant that the students' vocabulary achievement was good, 3 students (12.9%) got score between 81-90, it meant that the students' vocabulary

achievement was very good, and there were 2 students (8.7%) got score between 81-90, it meant that the students' vocabulary achievement was excellent.

The result of both Pre-test and Post-test of one group experimental were presented as below:

**Table 4.11 The Result of Pre-test and Post-test of one group experimental**

No	Students	Score of Pre-Test	Score of Post-Test
1	A.D.A.	80	100
2	A.R.	78	79
3	A.K.S.	67	79
4	B.F.S.	62	75
5	D.A.H.	63	83
6	D.A.P.	76	81
7	D.A.	80	80
8	E.D.N.	46	64
9	E.R.	73	78
10	F.R.N.I.	54	85
11	F.O.	56	71
12	H.C.	69	70
13	I.D.	50	64
14	I.K.	63	69
15	I.S.	66	78
16	K.A.S.	85	100
17	M.C.N.	49	75
18	M.A.K.	58	71
19	M.A.N.	47	60
20	N.L.P.H.	63	71
21	P.A.K.	70	78
22	P.K.A.	60	73
23	R.N.	54	71

Based on the table above, there were 23 students as the sample of the research. The test was conducted by the researcher before and after implementing Secret Message Game.

The researcher used statistical test with paired sample t-test stated by SPSS 16.00 to convince of pretest and posttest of the effectiveness of using Secret Message Game on the students' vocabulary achievement. The result is as follows:

**Table 4.12. Paired Sample Statistic**

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE	63.8696	23	11.29080	2.35429
	POST	76.3043	23	9.74882	2.03277

The table above showed that the mean score of pretest was 63.86, while N for cell there were 23. Meanwhile, standard deviation for pretest was (11.29). Mean standard error for pretest was (2.354).

Thus, the mean score of posttest was 76.30, while N for cell there were 23. Meanwhile, standard deviation for pretest was (9.748). Mean standard error for pretest was (2.032).

**Table 4.13. Paired Sample Correlation**

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	PRE & POST	23	.738	.000

The table of paired sample correlation above showed that the large correlation between samples, the numeral of both correlation was (0.738) and numeral significance was (0.000).

**Table 4.14. Paired Sample Test**

	Paired Differences					t	df	Sig (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% confidence Interval of the Differences				
				lower	Upper			
Pair 1  Pre-Post	-1.243E1	7.74495	1.61493	-15.78395	-9.08562	-7.700	22	.000

The Table 4.12 above showed the result of analysis using T-test. The mean pre-test and post-test was (1,243), standard deviation was (7,744), mean standard error was (1,614). The lower different was (-15,78), while the upper different was (-9,085). The result test  $t = (-7,700)$  with df 22 and significance 0.000.

Interpretation toward  $t_{\text{count}}$  conducted by two methods:

- 1) Based on the test score  $t$  compared with  $t_c$  ( $t$  count) with  $t_t$  ( $t$  table), where  $df = 22$ , the result of numeral: 2,074 for standard significant 5% and 2,819 for standard significant 1%. With  $t_0 = -7.700$ , it means that more large from  $t_{\text{table}}$  (symbol minus in this matter ignored at standard significant 5% as well at standard significant 1%, it means the hypothesis null was rejected).
- 2) Based on the large of digit significant. In this case decision taken from the following consideration:
  - a. If probability  $> 0.05$  then hypothesis null was accepted
  - b. If probability  $< 0.05$  then hypothesis null was rejected

With the numeral of significant value  $0.000 < \text{significant level } 0.05$ , then the hypothesis null stated that there is no significant different score by using Secret Message Game on the students' vocabulary achievement at the seventh grade of SMPN 3 Kedungwaru Tulungagung was rejected.

## **B. Hypothesis Testing**

The hypothesis testing of this study was as follows:

- a. If the significant value  $< \text{significant level}$ , the alternative hypothesis ( $H_a$ ) was accepted and null hypothesis ( $H_o$ ) 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.
- b. If the significant value  $> \text{significant level}$ , the null hypothesis ( $H_o$ ) was accepted and alternative hypothesis ( $H_a$ ) was rejected. It means that there was not different score on the students' vocabulary achievement before and after being taught by secret message game. The different was not significant.

Based on statistical calculation 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  $t_{\text{table}} 2,074$  the  $df : 22$  whereas the  $t_{\text{count}} 7,700$ . When the significant value  $(0.000) < \text{significant level } (0.05)$  the alternative hypothesis ( $H_a$ ) was accepted and the null hypothesis ( $H_o$ ) was rejected. While significant value  $(0.000) > \text{significant level } (0.05)$  the null hypothesis ( $H_o$ ) was accepted and

the alternative hypothesis ( $H_a$ ) was rejected. Because significant value (0.000) was smaller than significant level (0.05), it can be concluded that alternative hypothesis ( $H_a$ ) was accepted and the null hypothesis ( $H_o$ ) 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 taught using secret message game is 63.86, and after being taught using secret message game was 76.30, it means that the mean before being taught using Secret Message Game was lower than after being taught using Secret Message Game. Thus, it can be concluded that the Secret Message Game is effective used on the students' vocabulary achievement in seventh grade of SMPN 3 Kedungwaru Tulungagung.

### **C. Discussion**

As it was previously stated that the T-test is used to check the significant different in scores achieved by one group. The data analysis shows that  $t_{count}$  bigger than  $t_{table}$  ( $7,700 > 2,074$ ). It means that the alternative hypothesis ( $H_a$ ) is accepted and null hypothesis ( $H_o$ ) is rejected. It shows that there is significant different score of the students' between before and after being taught using Secret Message Game in teaching vocabulary.

Based on the hypothesis testing, the alternative hypothesis ( $H_a$ ) is accepted and the null hypothesis ( $H_o$ ) is rejected. Thus, the finding indicated that the use of the Secret Message Game gives significant effect on the students' vocabulary achievement. The Secret Message Game can improve students' vocabulary mastery.



Based on the research method, the study is done into three steps. First step is preliminary' study where the researcher wants to know the students' vocabulary ability by administering a pretest.

The second step is giving a treatment to the students. The treatment here is teaching vocabulary by using Secret Message Game. The students are given material of new vocabulary that these vocabs are never taught at school. The researcher gives new vocabularies as well the meaning of vocab, and then explains these vocabularies along with rearranging words. (Nation, 1978a) is a useful way of learning new vocabulary, in particular becoming familiar with the spoken form of the word and linking it to its meaning. Teaching new vocabulary must be familiar with the words and know the meaning of the words. To apply this game, the researcher asks to students to make groups consist of 4-5 person. Thus, the researcher gives each of groups rearrange words and rearrange letter. Then, the students must rearrange letter into words, and also arrange words in sentences. After getting treatment, the last step the researcher giving a posttest to the students.

The game provides a nonthreatening environment for coping with new learning. When students are having fun, they are more likely to take risks; make mistakes without having feelings of failure, and try to overcome their initial flings of confusion when they encounter new words and patterns (Paul, 2007: 49). Moreover, games help to create a context in which students' attention is focused on the completion of a task without necessarily realizing that language items are being practiced (Toth, 1995: 6).

In the pretest, the average score was 63.86. While, the average score in posttest was 76.30. The score showed that posttest was better than pretest. From the result above, it can be concluded that the students got good achievement in mastering vocabulary after taught using secret message game.

Based on the result above, teaching vocabulary by using Secret Message Game makes the students understand the meaning of vocabularies easily and they can write correct of vocabulary. So, Secret Message Game is alternative for the students in learning English especially in vocabulary. This reason is based on the result of test after getting treatment.

The activity using the game makes the students are easy to understand the material. In addition, this activity invites the students to be active and creative. Active here means that the students participate in studying of English and they feel fun. Meanwhile, creative here means that the students practice in arranging letter into word.

From the explanation above, the implementation of Secret Message Game in teaching and learning process gives 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. The description above implies that the game offer fun situation for the learner, so that they can learn better. Consequently, they can improve them vocabulary through the implementation of the game.