

CHAPTER IV

FINDING AND DISCUSSION

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

A. The Description of Data

In this section, by administering pre-test and post-test to the students', the researcher got scores of students' vocabulary achievement. As mentioned previously, the researcher wants to know whether there is different result between the students before and after taught by using crossword puzzle.

The test given by the researcher was 30 items and consists of 3 kinds of vocabulary test. The first kind is c-test that consists of 10 items. The second is matching test that consist of 10 items and the last is puzzle test that consists of 10 items. Before conducting the treatment, the researcher gave pre-test to the students to know how far their vocabulary achievement. This test is to know the students' vocabulary achievement before students got a treatment. From of pre-test, the result showed that the students' vocabulary achievement was not bad. After getting the result of pre-test, the researcher gave treatment to the students by using crossword puzzle. The students were enjoyed and fun in learning process. The teaching and learning process was done effectively.

After doing treatment, the researcher gave a post-test to the students'. This post-test was given to know the students' vocabulary achievement after being taught by using crossword puzzle. The researcher wanted to know how far the students' achievement of vocabulary when the treatment was done. Thus, the result of post-test showed that students' vocabulary achievement improved significantly.

To describe the data, the researcher showed the criteria of score of the students' test result, mean of the result, and percentage of the test. To know the students' achievement whether it was good or not, the researcher gave the criteria as follows:

Table 4.1 Criteria of the Score

No.	Interval Class	Criteria
1	80-100	Very Good
2	70-79	Good
3	60-69	Enough/Fair
4	50-59	Poor
5	0-49	Bad/Low

Table 4.2 Descriptive Statistic of Pre-test**Statistics**

VAR00001

N	Valid	26
	Missing	0
Mean		75.5769
Median		74.0000
Mode		70.00 ^a
Std. Deviation		6.81864
Variance		46.494
Sum		1965.00

a. Multiple modes exist. The smallest value is shown

Based on the table 4.2 above, there are 26 students. It shown that Mean score 75.5769, it means that the average of 26 students are got 75 scores. Based on criteria success of students' score 75 are good score. The median score is 74.0000 and the mode is 70.00. The mode is simply that value which had the highest frequency. It means that the most frequent score is 70 that indicated many students got good score. Then the standard deviation is 6.81864.

Table 4.3 Frequency of Pre-test**VAR00001**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	63	1	3.8	3.8	3.8
	66	1	3.8	3.8	7.7
	67	1	3.8	3.8	11.5
	69	1	3.8	3.8	15.4
	70	4	15.4	15.4	30.8
	73	4	15.4	15.4	46.2
	74	2	7.7	7.7	53.8
	76	2	7.7	7.7	61.5
	78	1	3.8	3.8	65.4
	79	2	7.7	7.7	73.1
	82	3	11.5	11.5	84.6
	85	2	7.7	7.7	92.3
	88	2	7.7	7.7	100.0
	Total	26	100.0	100.0	

Based on the table 4.3 the researcher can see that one students got score 63, it means that the achievement of students in vocabulary of SMPN 2 Sumbergempol is fair. The students got score 73 are four students, that means the students have good achievement in vocabulary. Then, three students got score 82 its means that the student belongs to very good criteria. The last, the students got 88 score is only one, that score is a very good criteria in vocabulary.

The post-test was given by asked the students to answer of question and based on stimulate of crossword puzzle as a game in teaching vocabulary. There were 26 students as subject in this research. It was done after the treatment

process by giving puzzle in the class. In this test was intended to know the vocabulary use crossword puzzle in vocabulary class.

Table 4.4 Descriptive Statistic of Post-test

Statistics

VAR00002

N	Valid	26
	Missing	0
Mean		88.2692
Median		89.0000
Mode		85.00 ^a
Std. Deviation		5.28059
Variance		27.885
Sum		2295.00

a. Multiple modes exist. The smallest value is shown

Based on the table 4.4 above, there are 26 students. It shown that means score is 88.2692, its mean that the average of 26 students get 88 score. That means the students got very good criteria and their achievement in vocabulary is better. The median score is 89.0000. In this research the mode score is 85.00. It means that the most frequent score is 85, so there are many students got very good score in vocabulary. Then standard deviation is 5.28059.

Table 4.5 Frequency of Post-test**VAR00002**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	79	1	3.8	3.8	3.8
	80	2	7.7	7.7	11.5
	81	1	3.8	3.8	15.4
	82	1	3.8	3.8	19.2
	85	5	19.2	19.2	38.5
	87	1	3.8	3.8	42.3
	88	2	7.7	7.7	50.0
	90	2	7.7	7.7	57.7
	91	5	19.2	19.2	76.9
	94	4	15.4	15.4	92.3
	97	2	7.7	7.7	100.0
	Total	26	100.0	100.0	

Based on the table 4.5 can see that one students got 79 score, it mean the students have good score in vocabulary. The students got score 85 are five students; it means that the students have very good score also and got a good score. The students got 91 score are five students'; it means that five students belongs to a very good in vocabulary. Then, the students get score 94 are four students it means that students have a very good score in vocabulary. There is two students got 97 score, this score is highest than other, although not the maximum score but the achievement of the students is very good in vocabulary.

Therefore, there are some differences of data presentation between before and after treatment process done. The data presented that the score after taught by

crossword puzzle better and higher than before taught used by crossword puzzle as a game in vocabulary achievement.

B. Hypothesis Testing

The hypothesis testing of this research is as follow:

1. If the significant level is bigger than t-table 0.05, the alternative hypothesis (H_a) is accepted and the null hypothesis (H_o) is rejected. It means that there is different score to the students before being taught by using crossword puzzle and after being taught by using crossword puzzle. The different shows that is any significant.
2. If the significant level is more than 0.05, the null hypothesis (H_o) is accepted and the alternative hypothesis (H_a) is rejected. It means that there is no any different score of the students before being taught by using crossword puzzle and after being taught by use crossword puzzle. That, there is no any significant different. To know whether the significant level is bigger or smaller than T-table the researcher analyzed the data by using SPSS statistics 16.0.

C. Data Analysis

Data analysis was done to know the different score before doing the test and after doing the test by searching after test and score before test. The

researcher used statistical test using Paired Sample T-test stated by SPSS 16.0 to ensure the effectiveness of teaching used by crossword puzzle game in improving students' achievement. The result is shown as follows:

Table 4.6 Paired Sample Statistics

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error
Pair 1	VAR00001	75.5769	26	6.81864	1.33725
	VAR00002	88.2692	26	5.28059	1.03561

Based on the table 4.6 above, output Paired Sample Statistics shows that mean of pre-test is 75.57 and mean of post-test is 88.26, while N for each other are 26. Meanwhile, the standard deviation of pre-test is 6.81 and standard deviation of post-test is 5.28. The standard error mean of pre-test is 1.33, while the standard error mean of post-test is 1.03.

Table 4.7 Paired Sample Correlations**Paired Samples Correlations**

	N	Correlation	Sig.
Pair 1 VAR00001 & VAR00002	26	-.459	.018

Based on the table above, the output of Paired Sample Correlation showed the large correlation between samples, where can be seen that numeral both correlation are 0.459 and numeral of significance is 0.018.

Table 4.8 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	-1.26923 E1	10.36444	2.03263	-16.87859	-8.50602	-6.244	25	.000

Based on the table above, it can be seen that the T-count is 6.244 with the df is 25. The score of vocabulary achievement before being taught by crossword puzzle is good, because the mean score of vocabulary is 75.5769, and after the students got a treatment the mean of vocabulary achievement is 88.2692 it

improved, the researcher used T-test analysis, the result of T-count is 6.244. The negative which appears in T-count above means the mean before treatment is lower than after treatment. Therefore, crossword puzzle is an appropriate game to improve vocabulary achievement for the students.

Then the researcher gave interpretation. First, the researcher considered the df , $df = N - 1$, in here df is 25. The researcher consulted the score in t-table. The significant level of 0.018, the score of t-table is 2.060. By comparing the “t” that the researcher has got calculation t-count is 6.244 and the value of “t” on t-table is 2.060. From the calculation above, t-count is bigger than t-table ($6.244 > 2.060$).

From the calculation above, t-count is bigger than t-table the alternative hypothesis (H_a) is accepted and the null hypothesis is rejected. It means that there is any significant different vocabulary achievement score of first grade of SMPN 2 Sumbergempol between before and after being taught by crossword puzzle.

D. Discussion

From the data analysis, the objective of the research is to know if there is an effect in applying that game crossword puzzle game in teaching vocabulary at the first grade of SMPN 2 Sumbergempol in academic year 2015/2016.

Based on the research method, the researcher conducted, firstly the step is giving pre-test for the students’; it means that to know the students’ vocabulary achievement before being taught by crossword puzzle game. Secondly, the step

was given treatment to the students; the treatment here was applying crossword puzzle. Thirdly, the step was given post-test. In the post-test the students were given a test to know their vocabulary achievement after the student was got a treatment by crossword puzzle as a game.

Based on the result of the statistical computation using T-test, the result showed that there is any significant difference between pre-test and post-test. The result T-test is 6.244, if the T-test is compared to T-table with the degree of freedom 25 as stated hypothesis testing; the T-test 6.244 is higher than the T-table 2.060. Therefore, based on the hypothesis testing, H_a is accepted and H_o is rejected, the theory is verified. It means that there was significant different between score of pre-test and post-test. It can be concluded that the students get good achievement in mastering vocabulary after they were taught by using crossword puzzle. The students' vocabulary achievement improves significantly, so teaching vocabulary by using crossword puzzle is effective to improve students' achievement on vocabulary.

Crossword puzzle is the game that can help the students organize their ideas and measure the students' achievement in vocabulary. Crossword puzzle can be selected to suit the needed and interest of the students. The used of game in teaching learning process is very important, so the teacher should be chosen the appropriate in teaching learning, especially in teaching vocabulary. According to Nurhajati and Wicaksono (Cahyono and Mukmintien, 2011: 41), using games in language class gives many advantages. First, games make the class fun. As stated above, young learners learn a foreign language because of external motivation. By

giving fun experience it will attract and motivated them to know more about the new language they learn. Second, playing a game has a purpose to it, an outcome. By playing a game children have a reason to communicate rather than just repeat things back mindlessly. Therefore, they want to know and learn more. Furthermore, the students get to use the language all the time during the games. A game in teaching learning can help the teacher to covey the material more easily and make the students feel enjoyed to study in the class. Furthermore, one of the teaching processes that is easy and interesting to apply in the class to teach vocabulary achievement is crossword puzzle game. Thus, game can be supported by thinking in an attempt to teaching vocabulary in the class.

Based on the explanation above, the advantages the use of crossword puzzles game gives positive effect towards students' vocabulary achievement. It has been verified by the result of data analysis in that there is significant difference between students' vocabulary achievement before and after taught using crossword puzzles game. Thus, it can be concluded that the use of crossword puzzles game is effective toward students' vocabulary achievement in teaching vocabulary because it can help the students to improve their new words at the first grade of SMPN 2 Sumbergempol.