

## THE EFFECTIVENESS OF USING CROSSWORD PUZZLE TO IMPROVE STUDENTS' VOCABULARY MASTERY

by

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### ABSTRACT

The aim of this study was to get empirical evidence about the use of Crossword Puzzle in improving students' vocabulary mastery. The method used in this study was quantitative method. This study was an experimental study with pre and posttest group design which involved 45 seventh grade students at *SMPN 2 Pringgasela*. The findings of this study showed that there was a significant improvement of students' vocabulary mastery after being taught by using Crossword Puzzle in which t-test score at the significant degree of 95% was higher than t-table. Thus, it can be stated that the use of Crossword Puzzle was effective in improving the students' vocabulary mastery.

**Keywords:** *Crossword Puzzle, Vocabulary Mastery*

### INTRODUCTION

Vocabulary is very important in learning foreign language especially English. The more vocabulary we have the more easily we understand the meaning of the language in spoken or written language. Furthermore, we can easily utter what is in our mind to people we speak with. On the contrary, if we have less vocabulary, we will have difficulty in understanding the meaning of the language and to express our opinions to others. As stated by McCarthy (1990:8) "No matter how well the students learn grammar, no matter successfully the sound of the L2 are mastered, without words to express a wide range of meanings, communication in an L2 just cannot happen in any meaningful way". This means that vocabulary is a very important thing in learning L2 or foreign language because it has a very important role in language.

As a matter of fact, it was assumed that teaching English in this case vocabulary, especially in 7<sup>th</sup> grade students at junior high school needs to be considered. Based on the preliminary research conducted at SMPN 2

Pringgasela on 24<sup>th</sup> October 2018 especially at the 7<sup>th</sup> grade students, the problems in teaching-learning English is the lack of vocabulary mastery.

There are some ways that can be used to solve the problems such as wordwall, flashcard, songs, and there are other vocabulary game that has been use by some researchers. Considering of what is being faced in this school, the researcher decided to use Crossword puzzle to overcome the problems. Thus, this study is to know whether crossword puzzle is effective to improve students' vocabulary mastery at the 7<sup>th</sup> grade students of SMPN 2 Pringgasela.

### LITERATURE REVIEW

#### Definition of Vocabulary

Vocabulary is the collection of words that construct a language. Brown (2001:377) stated that words are basic building block of language. It means words are the first thing that must be a language has. Without words, the other aspect of language will not exist.

### Definition of vocabulary mastery

Mastering a word means mastering the aspects of word knowledge (Utami 2014: 17). Thornbury (2002 :16) summarize that word knowledge include, the meanings, the spoken form, the written form, the grammatical behavior, the word derivation, the collocations of the words, the register of the word - spoken and written, the connotation or associations of the word, and word frequency.

### Definition of crossword puzzle

Dhan (2008:55) defines a crossword puzzle as a puzzle with sets of squares to be filled in with words/numbers, one letter/ number to each square. A crossword puzzle usually rectangular, divided into blank (white) and cancelled (black, shaded, or crosshatched) squares. This diagram is accompanied by two lists of number definitions or clues, one for horizontal and the other for vertical words, the numbers corresponding to identical numbers on the diagram.

## RESEARCH METHOD

This study adopted quantitative method with the experimental design. The population of this study is all students of grade VII in SMPN 2 Pringgasela in academic year 2018/2019 which consist of 70 students comprising three classes: VII-A with 25 students, VII-B with 22 students and VII-C with 23 students. Two classes were chosen as the sample, VII-B as control group and VII-C as the experimental group.

The data were collected through pre-test and post-test. The pre-test and post-test consist of 25 questions of multiple choices. The collected data from the pre- and posttest were analyzed and processed by using calculation of *t-test* formula with the help of SPSS.

In addition, Alternative Hypothesis ( $H_a$ ) and the Null Hypothesis ( $H_0$ ) were proposed. If the  $t_{test} (t_o) > t_{table} (t_t)$  in significant degree of 0.05, the alternative hypothesis ( $H_a$ ) is accepted and the null hypothesis ( $H_0$ ) is rejected and if the  $t_{test} (t_o) < t_{table} (t_t)$  in significant degree of 0.05, the alternative hypothesis ( $H_a$ ) is rejected and the null hypothesis ( $H_0$ ) is accepted. Meanwhile, the degree of freedom (df) =  $(N1+N2)-2 = (23+22)-2 = 43$ . It must be consulted with t-table of df. If df is 43, the value of the significance level 5% is 1.681.

## FINDINGS AND DISCUSSION

### Pre-Test Score

The experimental class highest pre-test score is 84 while the lowest pre-test score is 20. On the other hand, the control class highest pre-test score is 88 and the lowest score is 16. Moreover, the experimental class' average/mean score is 48.70, the mode is 56 and the median is 52.00. On the other hand, the control class' average/mean score is 55.45, the mode is 56 and the median is 56.

### Post-Test Score

The experimental class highest post-test score is 92 while the lowest post-test score is 56. On the other hand, the control class highest score is 88 and the lowest post-test score is 56. Moreover, the average/mean score of the experimental class is 79.65, the mode is 80.00 and the median is 80.00. On the other hand the average/mean score control class is 74.00, the mode is 80.00 and the median is 76.00.

### Gain Score

That highest gain score from the experimental class is 68 and the lowest gain score is 4. While the highest gain score from the control class is 60 and the lowest gain score is 0. This calculation result indicates that most of the students from both experimental class and control class performed better in the post-test than the pre-test. But, some students from the control group performed worst in their post-test than their pre-test.

### Normality Test

According to the table 1, the “df” of the experimental class is 23 and the

control class is 22, it means the sample of each class is less than 50. Therefore the appropriate technique that will be used is Shapiro-Wilk. Furthermore, it can be seen that the “sig” score from experimental class is 0,315, while the “sig” score for the control class is 0,990. It means the “sig” score of experimental class and control class is bigger than 0,05, hence, as the basis for decision making in the Shapiro-Wilk normality test above. It can be concluded that the learning outcomes data for both classes are normally distributed.

**Table1. Normality Test of Pre-Test Score Table**

	Kode	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
pretest_score	experimental class	.149	23	.200*	.952	23	.315
	control class	.104	22	.200*	.987	22	.990

a. Lilliefors Significance Correction

\*, This is a lower bound of the true significance.

**Table 2. Normality Test of Post-Test Score Table**

Tests of Normality							
	Kode	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
posttest score	experimental class	.211	23	.009	.922	23	.072
	control class	.185	22	.049	.925	22	.096

a. Lilliefors Significance Correction

According to the table 2 above, it can be seen that the “sig” score from experimental class is 0.072, while the “sig” score for the control class is 0.096. It means the “sig” score of experimental class and control class is bigger than 0.05, hence, as the basis for decision making in the Shapiro-Wilk normality test above. It can be concluded that the

learning outcomes data for both classes are normally distributed.

### Homogeneity Test

From the result of homogeneity test in table 3, it can be seen that the degree of significance is 0.944 which is bigger than 0.05. Therefore, it can be said that

both groups in the pre-test are homogenous. Further, from the result of homogeneity test in table 4, it can be seen that the degree of significance is 0.944 which is bigger than 0.05. Therefore, it can be said that both groups in the pre-test are homogenous.

Table 3. The Homogeneity of the Pre-test

Pre-test score				
Levene Statistic	df1	df2	Sig.	
.005	1	43	.944	

Table 4. The Homogeneity of Post-test Posttest score

Levene Statistic	df1	df2	Sig.	
.451	1	43	.505	

### The Analysis of the Data

#### Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Gain	Equal variances assumed	.050	.824	2.645	43	.011	12.41107	4.69288	2.94698	21.87516
	Equal variances not assumed			2.644	42.857	.011	12.41107	4.69418	2.94344	21.87870

From the result of the statistical calculation above, it can be seen that the value  $t_0$  or  $t_{test}$  is 2.645 and the degree of freedom is 43. The value of significant 5% or  $t_{table}$  of df 43 with  $\alpha = 0.05$  is 1.681.

#### Hypothesis Testing

According to the statistical calculation above, the value of  $t_0$  is 2.645 and the degree of freedom is 43 with 5% degree of significance used by the researcher. Based on the significance, it can be seen that on  $df=43$  in significant 5% the value of  $t_{table}$  is 1.681 by comparing the result of  $t_{table}$  and  $t_0$ , the degree of significance of 5%,  $t_0 < t_{table} = 2.645 < 1.681$ . According to

the result it can be concluded that the Null Hypothesis ( $H_0$ ) is rejected and Alternative hypothesis ( $H_a$ ) is accepted.

#### DISCUSSION

The research finding above shows that in the post-test, the students from experimental class performed better than students from control class. This interpretation is based on the comparison of experimental class and control class students' average score, mode and median. Afterward, the experimental class students' gain score illustrates that the average gain score for experimental class is higher than the gain score from control class.

From the result of statistical calculation, it was obtained the t-observation ( $t_0$ ) is 2.645; meanwhile the

t-table ( $t_t$ ) of df (43) in significance 5% is 1.681. It means t-observation ( $t_o$ ) is higher than the t-table ( $t_t$ ), so the Alternative Hypothesis ( $H_a$ ) is accepted and the Null Hypothesis ( $H_o$ ) is rejected. Therefore, it can be inferred that crossword puzzle is effective in improving students' vocabulary mastery.

In addition, it can also be concluded that crossword puzzle helps the teachers of SMP N 2 Pringgasela in increasing his creativity in teaching vocabulary and in making an interesting learning process to achieve the objectives. It was found that the students seemed interested in learning English especially vocabulary, it is because crossword puzzle is a word game that makes an enjoyable learning process and the students divided into 5 groups which consist of 5 or 6 people each group, so they do not feel the tension in learning. The students followed the learning process well, it means that they were responsible in mastering the materials and they were capable of sharing and explaining the materials to their group and in front of the class.

It simply illustrates that the students who are taught by using crossword puzzle have a better improvement in mastering vocabulary than those who were taught by another strategy seemed to enjoy the learning process less and some even felt sleepy.

## CONCLUSION AND SUGGESTION

### Conclusion

There are many games and media that become a tool for teaching and learning activity such as: flash card, word wall, etc. One of the strategies that can be used is crossword puzzle. Crossword puzzle is a word game with sets of squares to be filled in with words/numbers, one letter/ number to each square. We should fill the squares by guessing based on clues given. This

crossword puzzle can be an effective strategy in learning English especially vocabulary because it makes the learning process enjoyable for the students so that the learning objective can be achieved.

The data analysis result showed that the *t-test* in the significance degree ( $\alpha$ ) of 5% is  $t_o > t_{table}$  ( $2.645 < 1.681$ ). Therefore the Null Hypothesis ( $H_o$ ) is rejected and the Alternative Hypothesis ( $H_a$ ) is accepted. In addition, it can be seen from the comparison between the gained score average of experimental class and the gain score average of the control class on the table 4.3, the gain score average in experimental class is 30.96, it is higher than the average gain score for the control group that is 18.55. It means crossword puzzle is effective in improving students' vocabulary mastery. Therefore, it can be concluded that the answer of the research question was proven that there is effectiveness of crossword puzzle on students' vocabulary mastery at seventh grade of SMP N 2 Pringgasela in academic year 2018/2019.

### Suggestion

Based on the findings of this study, it is suggested that the English teachers should be creative in developing the teaching and learning strategies and activities in classroom to make the class alive and enjoyable so the students don't get bored, one of those strategies is the use of crossword puzzles. There are some advantages of using crossword puzzle, such as students are more active in coordinating hand, eye, and speed of thinking simultaneously. However, this study is not without weaknesses in which the crossword puzzle can cause a little difficulty for the students who have a low level ability and participation in subjects. Therefore, it is suggested that the next researchers develop the study in using this strategy or other strategies in

teaching vocabulary to make the students interested in learning and understand the material more easily.

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